

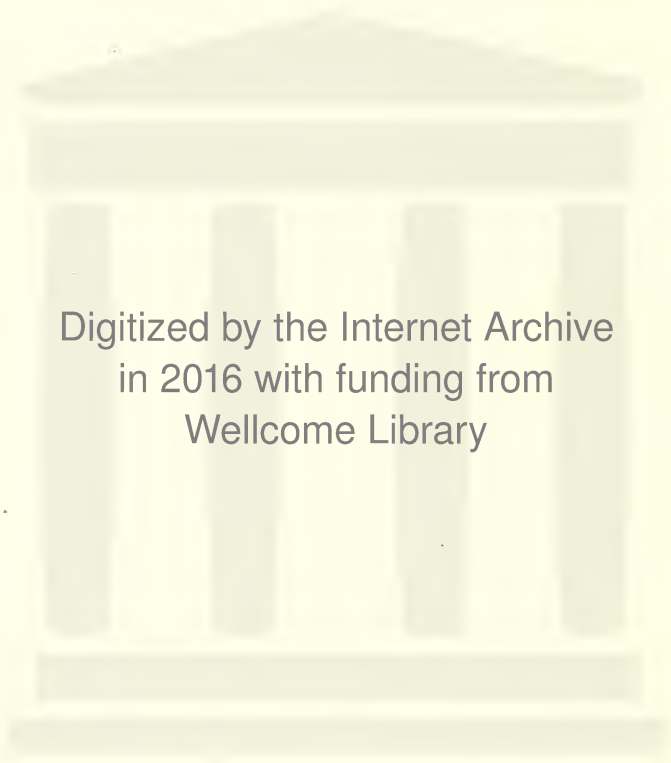


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ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS,
AND PLACES OF GROWTH.

TO WHICH WILL BE ADDED,
OCCASIONAL REMARKS.

BY

JAMES EDWARD SMITH, M.D. F.R.S.

MEMBER OF THE IMP. ACAD. NATURÆ CURIOSORUM, THE
ACADEMIES OF STOCKHOLM, UPSAL, TURIN,
LISBON, LUND, BERLIN, PHILADELPHIA, AND
THE NAT. HIST. SOCIETY OF PARIS;
PRESIDENT OF THE LINNÆAN SOCIETY.

THE FIGURES BY

JAMES SOWERBY, F.L.S.

—“VIRESCERE ACQUIRIT EUNDO.”—VIRG.

VOL. VIII.

L O N D O N:

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MDCCXCIX.



SATYRIUM albidum.

White Satyrion.

GRNANDRIA Diandria.

GEN. CHAR. *Nectary* an inflated roundish bag behind the flower.

SPEC. CHAR. Bulbs fasciculate. Leaves lanceolate. Lip of the nectary three-cleft, acute; the middle segment longest.

SYN. *Satyrion albidum.* *Linn. Sp. Pl.* 1338. *Huds.* 387. *With.* 31. *Lightf.* 519. *Dickf. H. Sicc. fasc.* 1. 15.

Orchis palmata thyrsos specioso, longo, dense stipato, ex viridi albente. *Dill. in Raii Syn.* 382.

FRESH specimens of this rare plant were sent us in June last from Hafod, Cardiganshire, by Miss Johnes. It grows copiously on the elevated exposed grassy hills which surround that romantic place, as well as in similar situations in Scotland; nor have we ever observed it in moist meadows, as Hudson (after Dr. Richardson in Ray's Synopsis) mentions. Hence I have been led to suspect the propriety of this synonym, and whether the preceding *Orchis*, n. 23, which remains unnoticed by late authors, may not rather belong to the plant before us. It must be confessed, indeed, that the epithet "*odorata*" scarcely agrees with *Satyrion albidum*, but neither does "*thyrsos specioso*." I have had some idea of this n. 23 being the *Orchis sambucina*, which the Rev. Mr. Wood of Leeds thinks he once found near Snowdon.

The root of *S. albidum* is thus explained by Mr. Sowerby, from the consideration of several specimens: *a* a central fibre; *b* one a little above it; *cc* a pair of fibres, one on each side; *dd* a pair of old bulbs, the origin of the present plant; *ee* a pair of bulbs for next season; *ff* a younger pair.

The stem is scarcely a foot high, roundish, leafy. Leaves sheathing, lanceolate, of a light green, rather glaucous beneath, the lowermost broadest and most obtuse. Spike of many small greenish-white flowers, almost inodorous, each of them accompanied by a lanceolate bractea rather longer than the germen. Petals concave, all nearly equal. Spur longer than in most of the genus, so as almost to make it an *Orchis* according to Linnæan rules, and it certainly has great affinity with several of that genus in other respects. Lip green, palmate, with three lobes, of which the middle one is larger, and sometimes blunter, than the others.



CALTHA palustris.

Marsh Marigold.

POLYANDRIA Polygynia.

GEN. CHAR. *Cal.* none. *Petals* 5. *Nectaries* none.
Capsules several, with many seeds.

SPEC. CHAR.

SYN. *Caltha palustris.* *Linn. Sp. Pl.* 784. *Huds.* 245.
With. 511. *Relb.* 217. *Sibth.* 176. *Curt. Lond.*
fasc. 1. t. 40.
Populago. *Raii Syn.* 272.

CALTHA is one of the ancient names of Marigolds in general, and is retained by Linnæus for this plant with the more propriety, as being derived from *calathus*, a cup, to which the flowers of the marsh marigold have more resemblance than those of any other kind. The genus of *Caltha*, of which this is the only species, is greatly allied to *Trollius*, but has fewer petals, and wants the petal-like nectaries of that genus. The *Trollius* has also fewer seeds in each capsule than the *Caltha*.

This plant is found plentifully in moist meadows, and about rivers and brooks, flowering early in the spring, when its brilliant blossoms make a very ornamental appearance. They are sometimes found double, and in that state are cultivated in gardens; but the flower in its natural single form is larger, and, to the admirer of genuine Nature, much more beautiful. The root is perennial, and consists of many simple fibres. Stem upright, a foot and half high, a little branched, leafy, roundish, furrowed. Leaves heart-shaped, crenate, veiny, smooth, of a deep shining green; the radical ones on long semicylindrical hollow foot-stalks, the others alternate and nearly sessile. Stipula on the inside of the foot-stalk, sheathing, membranous, soon withering. Flowers axillary, solitary, on simple stalks, and consisting of five large equal roundish concave petals of a golden hue, as are also the stamina and pistilla.—The young buds are pickled as a substitute for capers, which they greatly resemble in form, and perhaps equal in merit, for both are acrid, and only rendered eatable by the acid pickle. The true caper buds are easily distinguished by their simple germen.



Adonis vernalis L. / *Adonis vernalis* var.

P L A N T A G O lanceolata.

Ribwort Plantain.

T E T R A N D R I A Monogynia.

GEN. CHAR. *Cal.* four-cleft. *Cor.* four-cleft, inferior; its limb reflexed. *Stamina* very long. *Capf.* with 2 cells, bursting all round.

SPEC. CHAR. Leaves lanceolate, tapering at each end. Spike ovate, naked. Stalk angular.

SYN. *Plantago lanceolata.* *Linn. Sp. Pl.* 164. *Hudf.* 64. *With.* 196. *Relb.* 62. *Sibth.* 56. *Curt. Lond. fasc.* 2. t. 10. *Mart. Fl. Ruß.* t. 67.

P. quinquenervia. *Raii Syn.* 314.

COMMON every where in meadows and pastures, flowering in June and July, and the root is perennial. The leaves all grow from the root, and are for the most part upright; their form is truly lanceolate, pointed, entire, each tapering at the base into a long flat footstalk, ribbed like the leaf itself with five strong prominent nerves; they are of a dark green, most hairy beneath, and at their insertion invested with long white woolly hair springing from the crown of the root. Stalks erect, growing from among the leaves, and clothed at their base with the same kind of hair; upwards they are smoothish, simple, round with five deep furrows, twisted, a little longer than the leaves, and terminated by an ovate spike, which is imbricated with black scales, and enlivened by the prominent cream-coloured antheræ.

Some farmers have recommended this plant, by the name of rib-grass, as a good food for sheep, or to be made into hay for cattle in general. It yields indeed an abundant crop, but it has been said no domestic animal will eat it, except mixed with other vegetables; which, if true, is not much in its favour.

Mr. Woodward has observed that the spike is sometimes surrounded by large leaves, instead of the usual small bractæ; and we know it to become sometimes an abortive panicle.



No. 1798 *Ranunculus hyf.* Swartz London.

RHODIOLA rosea.

Rose-root.

D I Œ C I A Oñandria.

GEN. CHAR. Male. *Cal.* in 4 parts. *Petals* 4. *Nectaries* 4, notched. Female. *Cal. Pet.* and *Nect* like the male. *Pistilla* 4. *Capsules* 4, with many seeds.

SPEC. CHAR.

SYN. *Rhodiola rosea.* *Linn. Sp. Pl.* 1465. *Huds.* 434. *With.* 389.

Anacampseros radice rosam spirante major. *Raii Syn.* 269.

GATHERED by Mr. Oliver and the Rev. Mr. Harriman on Maze Beech Scar, Westmoreland. We have also received wild specimens from rocks on the north end of the island of Rathlin on the north coast of Ireland, found by J. Templeton, Esq. It is perennial, flowering in May and June.

Root strong and woody, somewhat fleshy, with a grey fatin-like bark. When dry it smells like rose-water. Stems several, simple, round, leafy. Leaves imbricated, somewhat obovate, pointed, often toothed towards the upper end, very fleshy, glaucous; in the male tipped with red. Cyme terminal, sessile, much branched. Flowers yellow, generally male and female on different plants, though one of Linnæus's own Lapland specimens appears hermaphrodite, as mentioned in his *Flora Lapponica*, where also he tells us that "the females of such specimens are barren like Sarah, while their husbands the antneræ obtain offspring from the less-splendidly-attired and unmarried Hagars of another plant," meaning the true female flowers, which have no stamina, and none, or but imperfect, petals. Hence Linnæus originally placed the genus in *Polygamia*. It is properly, however, diœcious. The male flowers have a perfect calyx, corolla, and (as we observe) nectaries, with eight or ten stamina, and an abortive four-notched germen, which sometimes grows to the full size of the fertile germen. The female flowers have a smaller calyx and corolla, more wrinkled and reddish, nectaries like the male, no stamina, but four or five distinct fertile germens, becoming capsules, with many seeds. This plant is much allied to *Sedum Telephium*, but cannot be referred to the same genus.



POLYGONUM Bistorta.

Bistort or Snakeweed.

OCTANDRIA Trigynia.

GEN. CHAR. *Cal.* coloured, in 5 segments, permanent.
Styles 2 or 3. *Seed* solitary, angular, invested with
 the calyx.

SPEC. CHAR. Stem simple, bearing one spike. Leaves
 ovate, running down into the foot-stalk.

SYN. Polygonum Bistorta. *Linn. Sp. Pl.* 516. *Huds.* 168.
With. 382. *Relb.* 158. *Sibth.* 128. *Curt. Lond.*
fasc. 1. t. 22. *Woodv. Med. Bot. t.* 34.

Bistorta major. *Raii Syn.* 147.

FROM Battersea meadows. The plant is most common in fertile pastures of the north of England, flowering in June. The root is perennial, not easily extirpated: it is somewhat fleshy, creeping, generally a little bent or zigzag, whence the names *Bis-torta* and *snakeweed*, and, being very astringent, has been used with effect where medicines of such a quality were wanted. Dr. Woodville informs us the dose is from a scruple to a dram of the root in substance.

The stem is quite simple, straight and erect, about a foot and half high, round, leafy. Leaves ovate, waved, veiny, entire, of a fine green, smooth, glaucous beneath, their base running down so as to render the footstalk winged. The stalks of the stem-leaves are dilated and sheathing. Spike solitary, terminal, cylindrical, blunt, nearly upright, composed of a great many beautiful pink-coloured flowers, having the proper number of stamina and styles that belongs to the genus, and each standing on a slender red flower-stalk, with a pair of membranous bractæ at the base. The seed is triangular, black, and shining.



LEONTODON Taraxacum.

*Dandelion.*SYNGENESIA *Polygamia æqualis.*GEN. CHAR. *Receptacle* naked. *Calyx* imbricated, with flaccid scales. *Down* simple, on a footstalk.

SPEC. CHAR. Outer scales of the calyx reflexed. Leaves runcinate, toothed, smooth.

SYN. *Leontodon Taraxacum.* Linn. *Sp. Pl.* 1122. *Huds.* 339. *Relb.* 294. *Curt. Lond. fasc.* 1. t. 58. *Woodv. Med. Bot.* t. 3.*L. officinalis.* *With.* 679.*Taraxacum officinale.* *Sibth.* 239.*Dens leonis.* *Raii Syn.* 170. n. 1. also 171. n. 2.

THE Dandelion is too common to be overlooked by the most incurious botanist; it clothes our meadows with yellow early in the spring, and may be found in bloom throughout summer in waste or ill-cultivated places. The root is perennial, deep and branching, rendering it a troublesome weed. Leaves radical, numerous, runcinate (that is, cut into lateral lobes which are hooked backwards), toothed, pointed, of a full grass-green, smooth. Stalks simple, round, hollow, smooth, single-flowered, brittle. Flower large, opening in the morning and in fine weather only, composed of numerous bright-yellow ligulate florets with 5 teeth. Calyx of several linear entire leaves, of which the outermost are more or less recurved. Styles observed by Mr. Sowerby to be hairy. Seeds obovate, furrowed, rough, bearing on a long footstalk a radiated tuft of simple down. Receptacle convex, dotted. The whole herb is milky and bitter, but, like Lettuce, becomes sweet by culture, or blanching.

The above English name, a corruption of the French *dent de lion*, lion's tooth, has taken place of a very coarse one expressive of the diuretic quality of this plant.

With respect to the *L. palustre* of Lyons, to which Dr. Withering has applied the name of *Taraxacon*, we scarcely think it more than a variety. It grows on wet commons, is less vigorous, has leaves less deeply lobed, and the outer scales of the calyx are shorter, ovate, and hardly at all reflexed. We suspect the γ of Hudson to be a distinct species, but must wait for more light before it can be determined.



Non. 1792 Published by J. Smith London

STELLARIA holosteæ.

*Greater Stitchwort.**DECANDRIA Trigynia.*

GEN. CHAR. *Cal.* 5-leaved, spreading. *Petals* 5, cloven. *Capsule* of one cell, with many seeds.

SPEC. CHAR. Leaves lanceolate, serrulated. Petals two-lobed.

SYN. *Stellaria holosteæ*. *Linn. Sp. Pl.* 603. *Huds.* 190. *With.* 417. *Relb.* 170. *Sibth.* 140. *Curt. Lond. fasc.* 2. t. 30. *Dicks. H. Sicc. fasc.* 7. 6.

Caryophyllus holosteus arvensis glaber flore majore.
Raii Syn. 346.

VERY frequent in groves and about dry hedge bottoms, where its brilliant white starry blossoms render it conspicuous in the spring. The herb has so much of a grassy appearance, that old botanists have named it the white-flowering grass.

Root perennial, creeping, small. Stems at their base decumbent, slender and very delicate, then upright, supporting themselves among bushes or grass, otherwise the least breath of wind would lay them prostrate; they are square, jointed, rough at the angles immediately under the joints, leafy, brittle, but with a strong woody structure in their inner part, as is the case with most of this tribe. Leaves opposite, sessile, lanceolate, long and sharp-pointed, a little revolute, their margins finely serrulated, their mid-rib sharp, their surface slightly glaucous and destitute of all pubescence. The stem terminates in a forked manner, leafy, somewhat paniced, and the flowers grow on long solitary simple stalks from its divisions. Calyx-leaves lanceolate, a little membranous at the edges. Petals inversely heart-shaped, cloven about half way down. Stamina white with yellow antheræ. Styles shorter, blunt and downy. Germen globular. Capsule of nearly the same figure, and containing about 6 or 7 kidney-shaped brown seeds.



No. 1799. Published by J. P. Sowerby London.

ARENARIA verna.

Vernal Sandwort.

DECANDRIA Trigynia.

GEN. CHAR. *Cal.* 5-leaved, spreading. *Petals* 5, undivided. *Capf.* of 1 cell, with many seeds.

SPEC. CHAR. Leaves awl-shaped, bluntish. Stem paniced. Petals longer than the calyx, obovate. Calyx with three remote equal ribs.

SYN. *Arenaria verna.* *Linn. Mant.* 72. *Hudf.* 191. *With.* 423. *Lightf.* 231. *Dicks. Dr. Pl.* 6. *Hort. Sicc. fasc.* 13. 17.

Alfine pusilla, pulchro flore, folio tenuissimo nostras. *Raii Syn.* 350.

THIS *Arenaria* grows plentifully on Arthur's seat near Edinburgh, but is most abundant about the lead mines of Derbyshire, on the soil thrown out of the mines, which scarcely nourishes any other plant. From thence our specimens were taken. We have received others from Wales and Durham, by favour of Mr. Griffith and Mr. Robson. It is perennial, begins flowering in May, and lasts above three months.

The root is very long and strong, descending perpendicularly, and branching below. Stems extremely numerous, branched, forming a thick spreading tuft, round, thickly clothed with opposite leaves, and terminating in upright panicles. Leaves narrow, awl-shaped but blunt, three-nerved, connate at their base. Bractæ ovate, sharp-pointed, three-nerved, concave, broader, but much shorter, than the leaves. Flower-stalks growing in a paniced manner, but not regularly forked; each is single-flowered, erect, with a pair of bractæ at its base. Calyx-leaves ovate, acute, with a broad whitish membranous border, and marked with three equal prominent ribs, which are more remote from each other than in some species. Petals longer than the calyx, obovate. Antheræ reddish. Capsule cylindrical. The whole herb, more especially the stem, is sometimes clothed with short viscid pubescence, but the leaves are mostly smooth. The *Arenaria* figured in Gerard, *Flo. Gallopr.* t. 15. f. 1. is the *recurva* of Allioni, not hitherto found in England, any more than the true *juniperina* and *laricifolia*.



PRIMULA elatior.

Oxlip.

PENTANDRIA Monogynia.

GEN. CHAR. *Capf.* 1-celled, superior. *Tube* of the *corolla* cylindrical, mouth pervious. *Stigma* globose.

SPEC. CHAR. Leaves dentated, wrinkled. Stalk many-flowered. Border of the corolla flat.

SYN. *Primula elatior.* *With.* 234. *Sibth.* 72. *Symons's Syn.* 53.

P. veris β. *Linn. Sp. Pl.* 204.

P. vulgaris β. *Huds.* 84.

P. inodora. *Relb.* 81.

P. pratensis inodorata lutea. *Raii Syn.* 284.

THE Oxlip, or Greater Cowslip, is much less frequent than the two most common kinds of *Primula* figured in *tab.* 4 and 5 of this work, but nevertheless occurs here and there in woods, thickets, or pastures, flowering in April. We received this specimen from the Rev. Mr. Hemsted, who justly observes that the flowers are by no means inodorous, but have a very grateful smell.

In describing the Primrose, we expressed a suspicion that the Oxlip might be a variety of that rather than of the Cowslip, or possibly an hybrid between the two. We are still much inclined to the latter opinion, and that it has originated from a Primrose impregnated by a Cowslip; its external habit, the contraction towards the middle of the leaf, and the umbellate flower-stalk indicating (according to Linnæus's ingenious idea) the *father*, while the blossom itself, in form, colour and scent, most resembles its *mother*. See *Linn. Diff. on the Sexes of Plants, Lond.* 1786. However this may be, the Oxlip is propagated by seed, which is the case with some other mule plants, as *Geraniums*. It also increases fast by its perennial root. Haller characterises it as having only the outer flowers nodding, while those of the Cowslip all droop; but the flat limb of the corolla affords a much better mark. The same author calls the umbel a *racemus*, not from ignorance, but he aimed at consequence by using terms different from those generally adopted.



Linn. 1770. *Publ. et ed. by* Linn.

V I N C A major.

Greater Periwinkle.

P E N T A N D R I A *Monogynia.*

GEN. CHAR. *Corolla* twisted, salver-shaped. *Pouches* 2, erect. *Seeds* without beard or wing.

SPEC. CHAR. Stems erect. Leaves ovate, finely fringed. Flowers on stalks.

SYN. *Vinca major.* *Linn. Sp. Pl.* 304. *Huds.* 91. *With.* 269. *Relb.* 89. *Sibth.* 79. *Curt. Lond. fasc.* 4. *t.* 19.

Clematis daphnoides major. *Raii Syn.* 263.

IN hedges and groves not very unfrequent in a truly wild state; though it is so generally cultivated in every ornamented shrubbery, and grows so readily, that we cannot always depend upon its being really of native growth. It flowers in May, and is one of the greatest ornaments of that favourite season.

The roots are perennial, creeping; the stems also, which are roundish and leafy, some of them trail and throw out roots, others grow erect and bear flowers, but even these afterwards take root from near their extremities. Leaves opposite, on footstalks, ovate, entire, finely fringed on their edges with short rigid hairs, otherwise smooth and shining. Flowers solitary, axillary, alternate, on stalks about half the length of the leaves. Calyx in five awl-shaped fringed segments, as long as the tube of the flower. Corolla of a fine purplish blue, salver-shaped, twisted (as in all this natural order of *Contortæ*); its tube inflated, and five-sided in the upper part. Stamina inserted about its middle, bowed, ciliated and compressed. Antheræ hooded. Germen double, with 2 glands at its base. Style simple. Stigma shaped like a pulley, orange coloured, its top five-lobed and downy. The fruit, which Mr. Curtis has not even mentioned, and which few botanists have seen, is produced every year in Mr. Kett's grounds at Seething, Norfolk, and consists of two awl-shaped, smooth, shining pouches, or *folliculi*, each containing one or two oblong seeds, with a groove down their upper side. These seeds are roughish, but naked, or destitute of beard, down, or wing.



No. 1798 Published by J. Sowerby London

RANUNCULUS bulbosus.

Bulbous Crowfoot. Butter-cups.

POLYANDRIA Polygynia.

GEN. CHAR. *Cal.* 5-leaved. *Petals* 5, with a honey-bearing pore on the inside of the claw of each. *Seeds* naked.

SPEC. CHAR. Calyx reflexed. Flower-stalks furrowed. Stem upright, many-flowered. Leaves compound.

SYN. *Ranunculus bulbosus.* *Linn. Sp. Pl.* 778. *Hudf.* 241. *With.* 508. *Relb.* 213. *Sibth.* 173. *Curt. Lond. fasc. 1. t.* 38. *Mart. Fl. Rusf. t.* 28. *Raii Syn.* 247.

COMMON in every pasture and grafs-plat, flowering in May, when the meadows are enamelled with its shining yellow blossoms in the greatest profusion.

Root perennial, a solid roundish bulb, throwing out several long fibres from its under side, but it scarcely appears to produce any offsets; the bulb for the next year is formed on the top of the old one. Stems one or more, erect, a foot high, branched above, but never producing runners below, round, hairy, hollow, leafy. Leaves on dilated hairy foot-stalks, hairy, compound, three-cleft and cut. Each branch of the stem ends in a simple, single-flowered, upright, furrowed flower-stalk. The calyx-leaves are ovate, concave, hairy, thin at their base, reflexed soon after they expand. Petals roundish, emarginate, concave, of a full varnished yellow; the scale which covers the nectary inversely heart-shaped. Germens small, compressed. It propagates itself copiously by seed, but is of slow growth and long duration. The flowers are rarely double.

The whole plant is acrid; and not a good food, if eaten at all unmixed by cattle; but as Nature does nothing in vain, and has abundant resources, it is not improbable that such plants, mixed with less pungent herbage, may act as a useful stimulus to these animals, as salt does to others.



RANUNCULUS repens.

Creeping Crowfoot.

POLYANDRIA Polygynia.

GEN. CHAR. *Cal.* 5-leaved. *Petals* 5, with a honey-bearing pore on the inside of the claw of each. *Seeds* naked.

SPEC. CHAR. Calyx spreading. Flower-stalks furrowed. Scyons creeping. Leaves compound.

SYN. *Ranunculus repens.* *Linn. Sp. Pl.* 779. *Hudf.* 240. *With.* 509. *Relb.* 214. *Sibth.* 173. *Curt. Lond. fasc.* 4. *t.* 38. *Mart. Fl. Rust. t.* 29.

R. pratensis repens. *Raii Syn.* 247.

FREQUENT in meadows, moist pastures, and especially in shady waste places, flowering in June, July and August. The fibrous root, and long creeping runners, easily distinguish this Crowfoot from the last, of which it is wonderful that any botanist should have thought it a variety. The flowering-stems are erect, branched and leafy. Leaves rather broader, and more distinctly twice ternate than those of the *bulbosus*; they are also darker, and often marked with a black spot. The calyx-leaves are spreading, not reflexed. In other respects these two species very much agree, and their qualities are similar. Both blister the skin, and are very acrid in taste. *R. repens*, though generally hairy, is sometimes found smooth, particularly on the north sides of church-yards, and such dank shady places.



P Y R O L A *secunda*.*Serrated Winter-green.**DECANDRIA Monogynia.*

GEN. CHAR. *Cal.* five-cleft. *Petals* five. *Caps.* five-celled, bursting at the angles.

SPEC. CHAR. Flowers all leaning one way.

SYN. *Pyrola secunda*. *Linn. Sp. Pl.* 567. *Huds.* 176.
With. 401. *Dicksf. H. Sicc. fasc.* 5. 8.

P. folio mucronato ferrato. Raii Syn. 363.

TO complete our history of the British *Pyrolæ*, as far as they are at present known, we have obtained wild specimens of the species now before us by the kind assistance of James Brodie, Esq. F.L.S., from the hill of Dunnairn in the Earl of Moray's forest of Darnway, in the neighbourhood of Brodie house. It is of very rare occurrence in this island, growing only under the shade of firs in the most alpine forests. Ray had it from Yorkshire. It is perennial, and flowers in July.

The roots are small and fibrous. Stems at first procumbent, creeping, slender, alternately branched, clothed with a few scattered lanceolate stipulæ; their extremities are angular, leafy and erect. Leaves on longish footstalks, spreading, ovate, acute, finely serrated, neatly reticulated with veins, smooth on both sides, of a bright pleasant green. Stalk terminal, erect, simple, bearing a few scattered lanceolate bractæ, and terminating in a simple cluster of greenish-white flowers, which stand on footstalks, each accompanied by a bractea, a little drooping, and all lean to one side. The calyx is small, its edges membranous and somewhat lacerated, as are those of the bractæ. Petals oblong, concave. Stamina equal and uniform, when young crooked, the antheræ bent outwards with their pores downward; when ripe the filaments become straight, the antheræ bent inwards, and their pores are uppermost, according to Mr. Sowerby's remark. The germen and capsule are depressed, with five furrows. Style long, straight, permanent, with a large, depressed, five-lobed stigma. The seeds are very minute and chaffy.

The other British species of this genus are described in our 3d volume.



Veronica L. f. *Veronica* L.

O R O B U S *sylvaticus*.*Wood Orobus, or Bitter Vetch.*D I A D E L P H I A *Decandria*.

GEN. CHAR. *Style* linear, downy above. *Calyx* blunt at the base, its upper segments deeper and shorter.

SPEC. CHAR. Stems lying down, hairy, branched. Leaflets numerous.

SYN. *Orobus sylvaticus*. *Linn. Sp. Pl.* 1029. *Hudsf.* 314. *Lightf.* 390. *t.* 16. *With.* 630. *Dickf. H. Sicc. fasc.* 1. 12.

O. sylvaticus nostras. *Raii Syn.* 324.

GATHERED by Mr. P. Harrison, druggist, of Darlington, at Gamblesby, Cumberland (where Ray found it), and sent to us by Mr. Robson. It has also been found at Hafod, Cardigan-shire, by Mr. Todd, the intelligent gardener of T. Johnes, Esq.; nor does it appear to be very rare in the mountainous (not alpine) woods and thickets of Wales and Scotland. It flowers in May or June, and the seeds are quite ripe in July.

Root strong and perennial, producing a great number of spreading stems, which lie almost prostrate; they are angular, a little hairy, leafy, at first simple, but after flowering short leafy branches grow out of the bosoms of the leaves above the flower-stalks. The leaves are alternate, with a pair of half-arrow-shaped stipulæ at their base, and consist of numerous, mostly opposite, oblong, pointed leaflets, without a terminal one. Flowers in clusters, on solitary, axillary, simple, long, many-sided stalks. Each flower stands on a reddish drooping bracteated partial stalk. The calyx is rather more hairy than the stalks, but the hairiness of the whole herb is variable. The figure of Lightfoot however, as Mr. Robson observes, represents it too hairy all over. The flowers are of a delicate cream-colour, streaked and tinged with purple; the keel in particular is tipped with the last-mentioned colour. The pods are compressed, smooth, of a light brown, and contain from one to three seeds.



Ann. 1790. Published by J. B. L. L.

P H L E U M alpinum.

Alpine Cat's-tail Grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* two-valved, abrupt, pointed, sessile, longer than the corolla, single flowered.

SPEC. CHAR. Spike ovato-cylindrical. *Aristæ* about as long as the glumes.

SYN. *Phleum alpinum.* *Linn. Sp. Pl.* 88. *Dicks. Tr. of Linn. Soc.* v. 2. 288. *With.* 119. *Fl. Dan.* t. 213.

FIRST discovered by Mr. Dickson on mountains near Garway Moor, Scotland, from whence Mr. Don and Mr. Mackay have favoured us with specimens. It is a truly alpine grass, making the principal part of the turf in the most elevated pastures of Switzerland, and probably is to be found in similar situations in more parts than one of our island. It is perennial, and flowers about the end of July.

The root is inclined to be creeping, and a little tuberous. Stem mostly solitary, simple, ascending, about a foot or more in height; leafy below; naked, smooth, striated and very straight above. Leaves broadish, sharp-pointed, rough in the margin. *Stipulæ* very short, but triangular, and less abrupt than in the common *Phleum pratense*. The sheaths of the upper leaves are inflated, and longer than the leaves themselves. Spikes scarcely an inch long, ovate, or nearly cylindrical, obtuse, tinged with dull purple, of which hue the straw, and sheaths of the leaves, mostly partake. The glumes of the calyx are ciliated with long hairs, and are a little divaricated; their keel is green. The *aristæ* which terminate them being almost, if not quite, as long as the glumes, distinguish this species from the *pratense*. The corolla consists of two unequal valves, of which the largest is ribbed and bearded.



Nov. 1798 is bl. led by J^r Sowerby London

A R U N D O arenaria.

*Sea Reed, or Marram.**TRIANDRIA Digynia.*

GEN. CHAR. *Cal.* of two valves. *Florets* surrounded with long down.

SPEC. CHAR. Calyx single-flowered, longer than the corolla. Panicle spiked. Flowers erect, beardless. Leaves involute, pungent.

SYN. *Arundo arenaria.* *Linn. Sp. Pl.* 121. *Hudsf.* 54. *Mart. Fl. Rust. t.* 32. *Dicks. H. Sicc. fasc.* 12. 5. *Calamagrostis arenaria.* *With.* 123.

Gramen sparteum spicatum, foliis mucronatis longioribus, vel spicâ fecalinâ. *Raii Syn.* 393.

FREQUENT on the sea-shores in loose blowing sand, to which it seems intended by Nature to give stability, and thus to raise a bulwark against the encroachments of the waves. On this account its growth is much encouraged on the coasts of Norfolk, where it is confounded with *Elymus arenarius*, and even *Carex arenaria*, under the name of *Marram*, and acts of parliament have been made for its preservation. It flowers in July.

Root perennial, creeping to a great extent, jointed. Stem nearly erect, three feet high, hard, round, smooth, jointed, leafy. Leaves a little spreading, rigid, sharp-pointed, glaucous, smooth, their edges rolled in; furrowed above; very smooth beneath, as well as their sheaths. Stipula long and lanceolate, pointed, torn. Panicle erect, resembling a spike, as the branches are short and close-pressed. Flowers greenish-white, erect. Calyx-glumes a little unequal, lanceolate, compressed, keeled, slightly three-nerved, their keels rough. Floret solitary, with short hairs at the base, its glumes like the calyx, but shorter. Antheræ purple. Germen invested with a bivalve membranous nectary, as in most grasses. Stigmas long and feathery.

Gmelin's genus of *Calamagrostis*, divided from *Arundo* merely because the calyx is single-flowered, seems to us unnatural, and the name is totally inadmissible, being compounded of two already in use, *Calamus* and *Agrostis*.



PILULARIA globulifera.

*Pill-wort, or Pepper-grass.*CRYPTOGAMIA *Miscellanea.*

GEN. CHAR. *Common Receptacle* globose, with four cells and four valves, lined with numerous *antheræ*, and many globose *germens* beneath them.

SPEC. CHAR. - - - -

SYN. *Pilularia globulifera.* Linn. *Sp. Pl.* 1563. *Huds.* 462. *With.* 760.

Graminifolia palustris repens, vasculis granorum piperis æmulis. *Raii Syn.* 136.

SENT from near Yarmouth by Mr. D. Turner. It grows in watery places on gravelly or sandy heaths, as at St. Faith's Newton near Norwich, as also on Hillingdon common and Hounslow heath, though by no means a general plant, for it is not mentioned in the Cambridge or Oxford Floras.

The stem is perfectly prostrate and trailing, throwing out numerous roots (supposed to be perennial) by which it creeps to a considerable extent. Leaves simple, upright, awl-shaped, narrow and smooth. Fructification resembling pepper-corns, but downy, sessile, solitary, axillary, produced from May to the end of Autumn. What at first sight seems a capsule, is, in fact, a hollow receptacle, as in the fig, which separates into four valves, and is internally divided into as many cells. The valves are lined with organs of fructification, several sessile club-shaped *antheræ* being in the upper part, and about as many oblong *germens* occupying the lower. Jussieu says the *antheræ* are most numerous. He also remarks that the seeds are coated. Mr. Sowerby found the *germens* shaped like an acorn reversed, and terminating in a small acute style.

From the above description it appears that the *Pilularia* has almost as good a right to a place among the perfect flowers as the fig, and might perhaps be ranged in the *Monœcia Polyandria*. In habit and sensible qualities it has most affinity with the *Equisetum*, *Lycopodium*, and other plants of obscure fructification, which are akin to the proper Ferns.



Printed & Published by J. Storer, London.



LICHEN proboscideus.

Fringed Button Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.

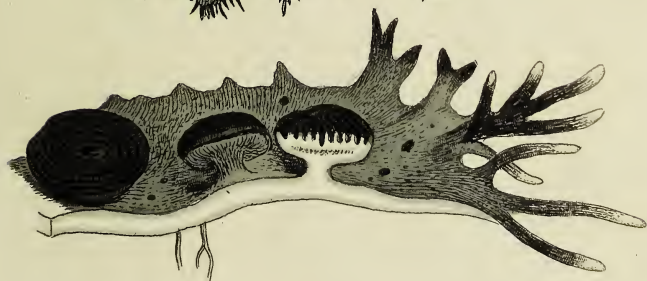
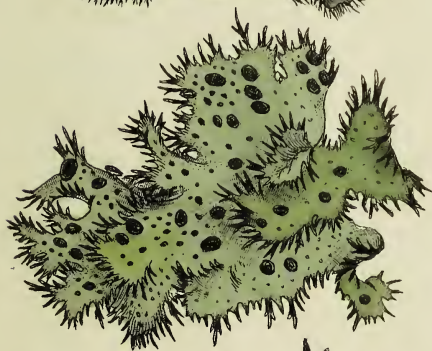
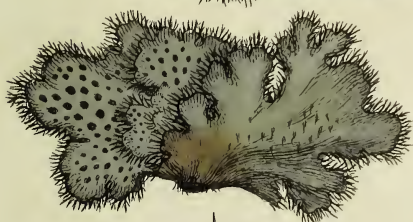
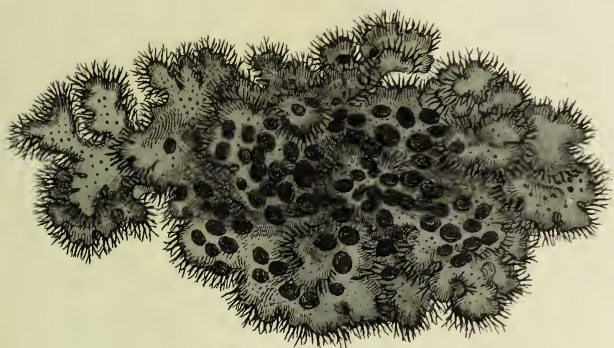
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Umbilicated, lobed, fringed. Tubercles on footstalks, their disk marked with concentric lines.

SYN. Lichen proboscideus. *Linn. Sp. Pl.* 1617. *Fl.**Lapp. ed.* 2. 453 *. *Huds.* 551. *With.* v. 4. 65.*L. crinitus.* *Lightf.* 860.*Umbilicaria crinita.* *Hoffm. Pl. Lich. t.* 44.*Lichenoides corneum*, marginibus eleganter fimbriatis. *Dill. Musc.* 218. *t.* 29. *f.* 116.

ON quartz or granite rocks in alpine countries. We have received specimens from several of our correspondents in Scotland, Wales, and the north of England.

This is one of that singular tribe of Lichens called umbilicated, because they grow attached by a central strong root, and are consequently much depressed in the middle of their upper side. This species is more lobed and expanded than some others; its colour is a greenish grey when wet, its surface slightly wrinkled, and its margin thickly fringed with black branched wiry hairs, from whence Mr. Lightfoot named it very aptly *crinitus*, and Professor Hoffmann adopted his name, being doubtful whether the plant in question were the *L. proboscideus* of Linnæus or not: as however the Linnæan herbarium has removed that uncertainty, we retain the original denomination. The doubt arose from Linnæus, as Lightfoot very truly observes, having "quoted a figure of Dillenius that has no resemblance to it, and neglected others of the same author, " which are very good, and exactly tally with it." The tubercles of this *Lichen* are copiously produced, quite black, standing on footstalks; their upper surface formed of irregular concentric lines, and looking much like one end of a piece of coarse black ribband rolled loosely together, so that there is generally a cavity or perforation in the middle among the folds. Smaller sessile tubercles are scattered over the frond, which have a sort of margin, and appear to be in a young state. The real *L. deustus* of Linnæus differs from this in being more simple, and entirely destitute of marginal fringe.



SCUTELLARIA *galericulata*.*Common Skull-cap.**DIDYNAMIA Gymnospermia.*

GEN. CHAR. *Cal.* rim nearly entire, closed and covered with a lid after flowering.

SPEC. CHAR. Leaves heart-lanceolate, crenate, rugged. Flowers axillary.

SYN. *Scutellaria galericulata*. *Linn. Sp. Pl.* 835. *Huds.* 265. *With.* 540. *Relb.* 236. *Sibth.* 190. *Curt. Lond. fasc.* 3. t. 36.

Cassida palustris vulgarior, flore cærulco. *Raii Syn.* 244.

COMMON about ditches and reedy rivulets, flowering in July and August.

The root is perennial and creeping. Stem erect, generally branched about the middle, thickly clothed with leaves to the top, square, roughish. Leaves opposite, spreading, on short footstalks, lanceolate, heart-shaped at the base, regularly and equally crenate to very near the point, rugged, veiny, clothed with very short hairs, paler beneath. Stipulæ none. Flowers axillary, solitary, almost sessile, a little drooping. Calyx hairy, slightly notched, furnished on the upper side with a small concave scale, which, after the corolla falls, is enlarged and overtops the already closed orifice. Corolla tubular, ringent, but not gaping, hairy, blue, the palate streaked with white, the tube pale and purplish. Stamina and style white. Stigma simple. The two opposite flowers generally droop together on the same side of the stalk.

This genus is easily distinguished by the singular structure of its calyx, which in its advanced state has been compared to a helmet, and serves as a capsule for the seeds, which are naturally four, though seldom all perfected, the plant being principally increased by its root.



See p. 98. P. bl. l. eddy / J. Scoby

SCUTELLARIA minor.

*Lesser Skull-cap.*DIDYNA MIA *Gymnospermia.*

GEN. CHAR. *Cal.* rim nearly entire, closed and covered with a lid after flowering.

SPEC. CHAR. Leaves heart-ovate, nearly entire. Flowers axillary.

SYN. *Scutellaria minor.* *Linn. Sp. Pl.* 835. *Huds.* 265. *With.* 540. *Curt. Lond. fasc.* 4. t. 43. *Dicks. H. Sicc. fasc.* 5, 6.

Cassida palustris minima, flore purpurascente. *Raii Syn.* 244.

A MUCH rarer plant than the last. It is however found on several moist heaths near London, as well as in Norfolk, and the more mountainous counties, flowering about August.

Root creeping, perennial. Whole habit much resembling the *S. galericulata*, but it is in every part a smaller plant; the stem is branched more from the bottom, the leaves broader in proportion to their length, and not rugged; they are for the most part perfectly entire, though sometimes found with a deep notch or two at their base, so as to become somewhat hastate. This variety was first pointed out to us on Barnes Common by G. Hibbert, Esq. F.L.S. Mr. Curtis has figured the entire leaves only. The flowers are not half so large as in the *galericulata*, and of a delicate pink colour, rarely blueish; their lip white spotted with red.

This hastate variety confirms the accuracy of Linnæus's remark concerning the great affinity between this species, the *galericulata*, and the *hastifolia*. The latter indeed cannot be confounded with this, having real hastate leaves, and being as large in all its parts as the *galericulata*, from which it is known at first sight by the leaves not being crenate.



SISYMBRIUM tenuifolium.

*Wall Rocket.*TETRADYNAMIA *Siliquosa.*

GEN. CHAR. *Pod* cylindrical, bursting with nearly straight valves. *Cal.* and *Cor.* spreading.

SPEC. CHAR. Leaves smooth, nearly entire; the lowermost once or twice pinnatifid; the uppermost undivided.

SYN. *Sisymbrium tenuifolium.* *Linn. Sp. Pl.* 917.

Brassica muralis. *Huds.* 290. *With.* 592. *Curt. Lond. fasc.* 3. t. 38.

Eruca sylvestris. *Raii Syn.* 296.

THIS plant has been known to English botanists by many different names, yet no one has hit on the right synonym of Linnæus. Mr. Hudson at first took it for his *Brassica Erucastrum*, misled perhaps by the quotation of Fuchsius, p. 262, which probably belongs to our plant; but having found his error, yet still thinking it a *Brassica*, in his 2d edition he called it *B. muralis*, falling into a fresh mistake in quoting the *Sisymbrium murale* of Linnæus as a synonym, which is very different, as may be seen in Dickson's Dried Plants, No. 12, and *Barrel. Ic. t.* 131. Linnæus adopted his *S. tenuifolium* from Dalibard, without seeing a specimen, nor is it, as such, in his herbarium; I was therefore obliged to learn in France what he intended: yet as the synonyms he quotes are all right, it might have been determined by them, with the help of his specific character, which, though not faultless, can hardly be mistaken. We follow Linnæus in this instance, as the spreading calyx makes it a *Sisymbrium*, not a *Brassica*, so that there is no occasion to recur to the uncertain mark of the nectariferous glands. The name *tenuifolium*, taken from J. Bauhin, is certainly exceptionable, some of the genus having much more finely cut leaves.

This *Sisymbrium* grows on the walls of many old towns, and is perennial, flowering all the summer. The stem is round, branched, leafy, smooth, with a few scattered hairs. Leaves alternate, glaucous, rather fleshy, for the most part simply pinnatifid, but some of them are frequently bipinnatifid; the uppermost generally, not always, simple. The margins of all are entire, sometimes slightly notched. The elegant straw-coloured flowers smell unpleasantly, and every part is pungent to the taste.

Linnæus latterly confounded this with his *S. catholicum*, which has sharply-ferrated leaves, and is a smaller more delicate plant.



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E M P E T R U M nigrum.

*Black Crow or Crake-Berry.**DIOECIA Triandria.*

GEN. CHAR. Male, *Cal.* in 3 divisions. *Petals* 3.
Stam. capillary, 3 to 9. Female, *Cal.* and *Fet.*
 as in male. *Stigmas* 9. *Berry* with 9 seeds.

SPEC. CHAR. Plant procumbent.

SYN. *Empetrum nigrum.* Linn. *Sp. Pl.* 1450.
Huds. 431. *With.* 176. *Dicks.* *H. Sicc. fasc.*
 2. 10.

E. montanum, fructu nigro. *Raii Syn.* 444.

A NATIVE of mountainous heaths in the northern countries, flowering in May, and ripening its berries in August. It clothes many a thousand barren acres, either on a moorish or stony soil; and its fruit, which has a mild flavour of the elderberry, affords sustenance to ptarmigans, grouse, partridges, and even to the hardy highlander himself. Linnæus in his *Flora Lapponica* informs us that too great a quantity of this fruit occasions the head-ach, and also that the plant bears equally well the extremest cold of the north of Sweden and the sulphureous smoke of the copper mines of that country, in which scarcely any other vegetable will grow.

The stem is shrubby, reddish, much branched, procumbent, the young branches only standing upright. Leaves irregularly imbricated, spreading, on short foot-stalks, oblong, blunt, flat on the upper side, their margins bent back so as to meet beneath, and these margins are ciliated, every other part being smooth. Flowers axillary, solitary, on short stalks, with a few small scaly bractæ. Calyx of 3 roundish leaves. Petals mostly 3, oblong, of a dull red. Stamina long and slender, 3 according to most authors, but Mr. Sowerby found 9, accompanied by an extraordinary number of petals, in specimens sent by Mr. Templeton from Ireland. Female flowers on a different plant, whose stem is of a brighter red. Their calyx and corolla like the male. Germen superior, round. Style we think simple, with 9 stellate stigmas. Berry with 9 seeds, closely arranged in a globular form. Linnæus mentions having found a few hermaphrodite plants, which made him at first place this genus in the *Polygamia* class.



LYSIMACHIA nemorum.

Yellow Pimpernel, or Wood Loofeftrife.

PENTANDRIA Monogynia.

GEN. CHAR. Cor. wheel-shaped. Caps. globose, pointed, with 10 valves.

SPEC. CHAR. Leaves ovate, acute. Flowers solitary. Stem procumbent. Stamina smooth.

SYN. *Lysimachia nemorum.* *Linn. Sp. Pl.* 211.

Hudf. 86. *With.* 237. *Relb. Suppl.* 3. 1.

Sibth. 74. *Curt. Lond. fasc.* 5. t. 18.

Anagallis lutea. *Raii Syn.* 282.

THE pretty yellow Pimpernel of the Woods is a great ornament to moist shady groves, flowering from the end of May till September, though in the greatest perfection and brilliancy about Midsummer. As the season advances, its long trailing branches hang elegantly over broken ground or mossy rocks, among little trickling rills, while its neat shining myrtle-like leaves are intermixed and entangled with tufted *Hypnum*s or the smaller kinds of fern.

The roots are perennial. Stems procumbent or pendent, taking root from some of the lower joints, branched, square, red and pellucid, leafy. Leaves opposite, on footstalks, ovate, entire, veiny, rather succulent. Every part of the herb is smooth. Flowers on long, slender, solitary, axillary, simple, often twisted, stalks. Calyx in 5 equal awl-shaped segments. Corolla spreading, divided about half way to the base, or farther, into 5 lobes. Filaments smooth, shorter than the corolla. Style a little club-shaped, with a simple blunt stigma. Capsule superior, globose, of 1 cell, bursting into 10 valves, which often stick together in pairs or irregularly in this as in other species. Seeds several, roundish.



LYSIMACHIA Nummularia.

Moneywort, or Creeping Loosetrife.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-shaped. *Caps.* globose, pointed, with 10 valves.

SPEC. CHAR. Leaves somewhat heart-shaped. Flowers solitary. Stem creeping. Stamina glandular.

SYN. *Lyfimachia Nummularia.* *Linn. Sp. Pl.* 211.

Huds. 87. *With.* 238. *Relb.* 84. *Sibth.* 74.

Curt. Lond. fasc. 3. *t.* 14. *Dicks. H. Sicc. fasc.*

12. 10.

Nummularia. *Raii Syn.* 283.

MONEYWORT, or Herb Twopence as it was formerly called, inhabits similar places with the preceding species, or rather the banks of wet ditches, creeping over the black boggy soil of very moist meadows, or on the margins of shady rivulets, flowering copiously in June and July. Root perennial. Stems several, perfectly prostrate and creeping, quadrangular but compressed, mostly simple. Leaves much rounder, paler, and more undulated than in the last. Segments of the calyx ovate, pointed. Corolla pale lemon-coloured, divided almost to the base; when magnified it is found to be clothed with small glands standing on footstalks, as are also the stamina. The antheræ are arrow-shaped. The stigma blunt, notched. The capsule is seldom perfected, nor are we able to figure it any more than Mr. Curtis.

The qualities of these two species of *Lyfimachia*, either in medicine or for agricultural purposes, are, we believe, altogether unimportant. Their taste is herbaceous, with a little unpleasant pungency or astringency.



Published by W. G. L.

ANAGALLIS arvensis.

Scarlet Pimpernel.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-shaped. *Capsf.* bursting all round. *Stamina* hairy.

SPEC. CHAR. Leaves ovate, dotted beneath. Stem procumbent.

SYN. *Anagallis arvensis.* *Linn. Sp. Pl.* 211. *Huds.* 87. *With.* 238. *Relb.* 85. *Sibth.* 74. *Curt. Lond. fasc.* 1. t. 12. *Dickf. H. Sicc. fasc.* 12. 11.

A. flore phœniceo. *Raii Syn.* 282.

A COMMON weed on sandy or gravelly soils in all kinds of cultivated land, flowering all summer long; yet, as Dr. Withering observes, "every part of it is singularly beautiful, and will amply repay the trouble of a minute examination."

Root small, annual. Stem procumbent, much branched at the bottom, square, smooth, leafy. Leaves opposite, rarely in fours, sessile, ovate, entire, smooth, with one rib and several longitudinal veins, dotted all over the under side with purple. Flowers axillary, solitary, on stalks longer than the leaves. Calyx-leaves lanceolate, with a membranous edge, very sharp-pointed. Corolla in 5 deep-cut roundish segments, minutely crenate or somewhat fringed, of a vivid scarlet with purple at the base. Stamina purple, fringed with hairs of the same colour. Antheræ heart-shaped, yellow. Stigma blunt, notched. Capsule globose, greenish, semitransparent, bursting in two equal hemispheres. Seeds many, angular, thickly crowded into a globe.

The blue Pimpernel is supposed to be a permanent variety of this. We have as yet found no specific difference. Ray mentions a white one.

This pretty flower opens only in fine weather, and infallibly closes against rain; hence it is called the poor man's weather-glass, and it is one of the most certain that can be consulted, as we have often experienced.



Dec. 1798. Published by J. P. Leach, London.

ANAGALLIS tenella.

Bog Pimpernel.

PENTANDRIA Monogynia.

GEN. CHAR. Cor. wheel-shaped. Caps. bursting all round. Stamina hairy.

SPEC. CHAR. Leaves roundish, somewhat pointed, on foot-stalks. Stem creeping. Stigma acute.

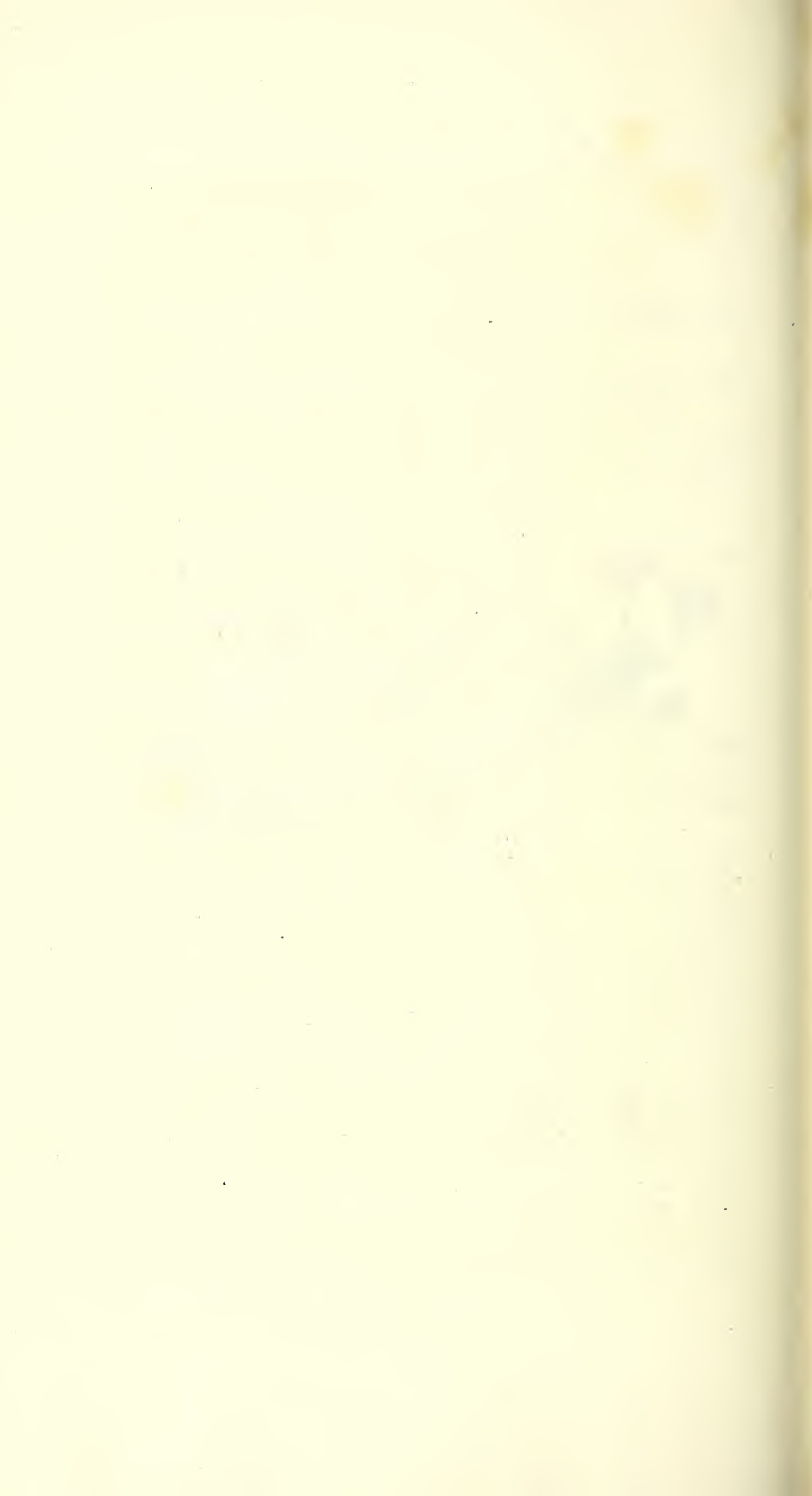
SYN. *Anagallis tenella*. Linn. *Syst. Veg. ed.* 14. 196. *With.* 239. *Relb.* 86. *Sibth.* 75. *Curt. Lond. fasc.* 3. t. 15.

Lyfimachia tenella. Linn. *Sp. Pl.* 211. *Huds.* 87. *Dicks. H. Sicc. fasc.* 2. 12.

Nummularia minor, flore purpurascens. *Raii Syn.* 283.

THIS most elegant little plant was sent us from Staffordshire by the Rev. T. Gisborne. It is not unfrequent on wet bogs throughout these kingdoms, flowering in July and August.

Root perennial. Stems spreading in every direction close to the ground, and taking root as they advance; they are slender, angular, smooth, clothed with opposite, small, roundish, or ovate, entire, smooth leaves, on shortish foot-stalks. Flowers erect, on very long, axillary, solitary stalks. Calyx-leaves lanceolate, acute. Corolla of an elegant rose-colour, deeply divided, but with a tubular base, so as to be rather funnel-shaped. Stamina clothed with numerous, curiously jointed, hairs. Antheræ roundish. Style long, tapering into a simple acute stigma. Capsule cut round, not often perfected. Linnæus had not seen the fruit when, in his *Species Plantarum*, he reduced this plant to the genus *Lyfimachia*, with which it agrees indeed in habit, but the stamina, capsule and seeds are those of an *Anagallis*. It bears a very considerable affinity to the *Gen-tunculus*, but the stamina of that are smooth.



CENTUNCULUS minimus.

Chaff-weed or Bastard Pimpernel.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* 4-cleft. *Cor.* 4-cleft, inferior, tubular; limb spreading. *Stam.* short, smooth. *Capsf.* of 1 cell, bursting all round, with many seeds.

SPEC. CHAR.

SYN. *Centunculus minimus.* *Linn. Sp. Pl.* 169.
Hudsf. 63. *With.* 198. *Curt. Lond. fasc.* 3. t. 11.
Dicks. H. Sicc. fasc. 7. 2.

Centunculus. *Dill. in Raii Syn.* 1.

ONE of the least of our "perfect plants," as they are called, which, perhaps, is reckoned more rare than it really is, from being so easily overlooked. It grows on watery, sandy heaths, and has been sent us from near Ampthill, Bedfordshire. It has been found on several heaths to the west and south of London, flowering in June and July.

Root small, and annual. The herb varies much in size, like all annuals. Stem generally a little branched at the base, erect, an inch or two high, a little angular, leafy, smooth. Leaves alternate, sessile, spreading, ovate, entire, smooth. Flowers solitary, sessile in the bosoms of the leaves, white or reddish, expanded only in the most brilliant sunshine, and very short-lived. Segments of the calyx lanceolate, acute. Corolla permanent, tubular at the base, its limb in 4 acute spreading segments. Stamina awl-shaped, smooth, very short, inserted into the tube. Capsule globose, crowned with the permanent style.

There is certainly great affinity between this plant and the *Anagallis*; M. de Jussieu has even said that it has sometimes 5-cleft flowers, with 5 stamina, and so becomes an *Anagallis*. We think, however, the smooth stamina, as well as the tubular form of the corolla, independent of number, justify Dillenius in making it distinct. It has the habit and flower nearly of *Lyfimachia Linum-stellatum*, with the fruit of *Anagallis*. The corolla is permanent, though it soon withers, being forced off only by the swelling seed-vessel.





P O A procumbens.

Procumbent Sea Meadow-grass.

TRIANDRIA Digynia.GEN. CHAR. *Cal.* of 2 valves, containing many florets.*Spikelet* inclining to ovate; glumes ovate, pointed, beardless.

SPEC. CHAR. Panicle lanceolate, pointing one way, condensed, rough; its common stalk round; spikelets about five-flowered; florets bluntish, ribbed.

SYN. *Poa procumbens.* *Curt. Lond. fasc. 6. t. 11.**P. rupestris.* *With. 146. t. 26.*

MR. CURTIS first discovered this *Poa*, at the foot of St. Vincent's rocks near Bristol, and has figured it from one of his garden specimens. Sir Thomas Frankland, Bart. to whom we are obliged for this wild one, has found the same grass plentifully on waste ground, which is frequently overflowed, near the floating dock in that neighbourhood, and also on the pier at Scarborough, within the spray of the sea. It flowers in July and August.

Root annual, fibrous. Whole plant glaucous. Stems several, more or less prostrate, about a span long, leafy, smooth, bent at the joints. Leaves flat, acute, nerved, roughish, with very long sheaths. Stipula sharpish, torn. Panicle rigid, leaning to one side, semicylindrical, its main and partial stalks nearly round, rough. Spikelets 2-ranked, sessile, lanceolate, 4 or 5-flowered, smooth. Calyx-valves blunt, very unequal, keeled; the outermost having 5 ribs. Florets blunt, 5-nerved, membranous, and torn at their apex; their inner valves ciliated.

Dr. Goodenough suspects Mr. Hudson's full description under his *P. maritima* may belong to this plant.

This *P. procumbens*, with *maritima*, *distans*, *aquatica*, *Festuca fluitans*, and *Cynofurus durus*, form a very natural tribe of *Poa*, with blunt florets, whose valves are ribbed, and whose spikelets are scarcely so truly ovate as the character of this genus requires. They are joined to the other species by means of *P. rigida*, and *compressa*, and, no doubt, form a natural genus with them.



1798 Published by J. Smith, London.

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LICHEN teffellatus.

Mosaic Lichen.

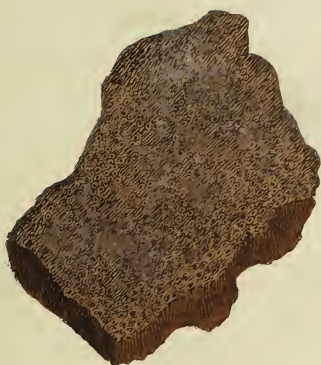
CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.

Female, smooth shields or tubercles, in which seeds are imbedded.

SPEC. CHAR. Crust gray, cracked, whitish about the tubercles, which are immersed, black, prominent, smooth.

THIS Lichen, for which we can meet with no synonyms, was discovered by Mr. Dawson Turner upon brick walls about Yarmouth. It covers the surface of the bricks with a gray crust, scarcely mealy, but full of minute angular uneven cracks. The tubercles are numerous, very prominent, pointed, and smooth, particularly black in the centre, destitute of any margin, immersed in the crust, and each always occupying a considerable angular portion of it, which is whiter, both within and without, than the rest of the crust. Sometimes these portions crowd one another into tolerably regular hexagons. When the older tubercles are cut across or rubbed down to the brick, it is found that the crust has been elevated along with their central part, as in *L. sanguinarius*, tab. 155.



THE HISTORY OF THE CITY OF LONDON

BY JOHN STOW.

THE HISTORY OF THE CITY OF LONDON, FROM THE FIRST BEGINNING THEREOF, TO THE PRESENT TIME. BY JOHN STOW. THE SECOND EDITION, CORRECTED AND ENLARGED. LONDON, Printed by I. B. for W. B. 1687.

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LICHEN coarctatus.

*Contracted Lichen.*CRYPTOGAMIA *Algæ.*

GEN. CHAR. Male, scattered warts.

Female, smooth shields or tubercles in which the seeds are imbedded.

SPEC. CHAR. Crust gray, cracked. Shields black, flat, with an elevated, white, mealy margin, when young drawn close over the centre.

FOR this new Lichen, found frequently on brick walls about Yarmouth, we are likewise obliged to Mr. D. Turner. Its crust is not much unlike that of the preceding, but more obsolete, and not so white. The shields are small, very flat, not at all immersed, of a blueish unpolished black. Their margin is considerably elevated, white, very mealy or downy. When young it is closely drawn or pursed up so as to cover the black part, in which state the fructification has the form of minute white downy specks.

What purposes these apparently inconsiderable productions answer in the all-wise œconomy of the creation we cannot always determine; but we know enough to be certain that each species is propagated and preserved by the same laws as the most splendid offspring of a tropical climate, and we may be as certain that nothing is made in vain. Minute caterpillars feed upon some of these Lichens, as the *Phalæna Lichenella*, and probably more inconspicuous ones which have not yet been investigated. We know of one end which they all answer in decay, the formation of vegetable mould, which being washed into the crevices of the stones it is formed upon, serves to receive and nourish the seeds of other vegetables.



NARTHECIUM offifragum.

Lancashire Asphodel.

HEXANDRIA Monogynia.

GEN. CHAR. *Cal.* none. *Petals* 6, spreading, permanent. *Stamina* thread-shaped, hairy. *Capsule* superior, prismatic. *Seeds* with an appendage at each end.

SPEC. CHAR.

SYN. *Narthecium offifragum.* *Huds.* 145. *With.* 339.

Anthericum offifragum. *Linn. Sp. Pl.* 446. *Fl. Dan.*

t. 42. *Dicks. H. Sicc. fasc.* 1. 5. *Relb.* 138.

Phalangium anglicum palustre, *Iridis folio.* *Raii*

Syn. 375.

ANATIVE of black turfy bogs in the north, as well as in Surrey, Kent, and on Derfingham moor Norfolk, where it flowers in July or August.

Root fibrous, somewhat tuberous and creeping as in the genus of *Iris*. Stem 6 or 8 inches high, curved at the base, erect, simple, round, smooth, clothed with a few alternate, short, pointed, carinated leaves. The radical leaves also resemble those of the *Iris*, except in being a great deal smaller; they are equitant, sword-shaped, pointed, nervous and smooth. Spike terminal, erect, of several yellow flowers, whose footstalks are erect, alternate, simple, angular, furnished with one bractea at the base, and another towards the summit. Petals linear-oblong, nervous, yellow, externally greenish, permanent. Stamina opposite to the petals and a little shorter, thread-shaped, clothed with thick-set yellowish hairs. Antheræ yellow, at length twisted and brownish. Germen oblong, pointed, triangular. Stigma small, capitate, nearly sessile. Capsule prismatic, pointed, tawny, polished, rigid, of three valves and three cells, the partitions proceeding from the centre of the valves. Seeds numerous, upright, imbricated, somewhat cylindrical, terminating at each end in an awl-shaped appendage.

This most distinct genus was separated from *Anthericum* by Moering in the 6th volume of the *Ephemerides Naturæ Curiosorum*, who has there given a full botanical history of the plant. Gorter follows him; and it is very remarkable that Haller by mistake quotes both under his *Anthericum n.* 1205, which is *A. calyculatum* of Linnæus, our *Tofieldia*. Hence Jussieu and other French botanists have called that by the name of *Narthecium*.

535.



Jan 5, 1790 Published by J. Sowerby London

TOFIELDIA palustris.

Scottish Asphodel.

HEXANDRIA Trigynia.

GEN. CHAR. *Cal.* 3-cleft. *Pet.* 6. *Styles* vertical, short. *Capsules* 3, superior, united at the base. *Seeds* many. *Antheræ* roundish.

SPEC. CHAR. Petals obovate, obtuse.

SYN. *Tofieldia palustris.* *Huds.* 157. *With.* 358.

Anthericum calyculatum. *Linn. Sp. Pl.* 447. *Lightf.* 181. t. 8. f. 2. *Dickf. H. Sicc. fasc.* 13. 11.

Phalangium icoticum palustre minimum, *Iridis folio.* *Raii Syn.* 375.

A MORE alpine plant than the last, though it grows in a similar soil, and forms green patches in the black boggy margins of trickling rills on the highland moors of Scotland, where it is found abundantly, flowering in August. It has not till lately been known to grow in England; but our wild specimen was sent by Mr. Robson from the county of Durham.

Root woody, with long whitish fibres. Leaves equitant, sword-shaped, nervous, almost all radical. Stem 4 to 8 inches high, nearly naked, simple, round. Spike erect, obtuse. Flowers greenish-white, on very short footstalks. Bractææ solitary, ovate, concave, small, at the base of each footstalk. Calyx small, three-cleft. Petals obovate, blunt, concave, equal, permanent. Stamina opposite to them, but scarcely so long, awl-shaped, smooth. Antheræ heart-shaped, roundish. Germen superior, 3-furrowed. Styles vertical, short, distant. Stigmas blunt. Capsules 3, joined at their base, gibbous, but scarcely inflated. Seeds numerous, elliptical, tawny.

This is a perfectly distinct genus from every other *Anthericum* as well as from *Narthecium*. We could much have wished to retain the last name for it, as Jussieu, Gerard, Villars, Allioni, and Lamarck (owing as it should seem to the mistake of Haller) have done; but nothing can set aside the prior right of *Narthecium* as given to the other genus by Moering. Our *Tofieldia* is indeed the original *Anthericum* of Linnæus in *Gen. Pl. ed.* 1. and *Hort. Cliff.*; but so many other species have since been added to it, and are now universally called *Anthericum*, that, as they are a good genus by themselves, it would make too great a confusion to name them afresh. If *Phalangium* were not the name of an insect, we should have preferred that to *Tofieldia*.



Jan. 1. 1799 Published by J. S. S. S.

STELLARIA media.

Common Chickweed.

DECANDRIA Trigynia.

GEN. CHAR. *Cal.* 5-leaved, spreading. *Petals* 5, cloven. *Capf.* 1-celled, with 6 valves, and many seeds.

SPEC. CHAR. Leaves ovate. Stems procumbent, with a hairy alternate ridge on one side. Stamina 5 to 10.

SYN. *Stellaria media.* *With.* 418.

Alfine media. *Linn. Sp. Pl.* 389. *Hudf.* 131. *Relb.* 128. *Sibth.* 105. *Curt. Lond. fasc.* 1. *t.* 20. *Fl. Dan. t.* 438 & *t.* 525.

A. vulgaris, seu Morfus gallinæ. *Raii Syn.* 347.

WE most readily follow Dr. Withering in his removal of this plant from the genus of *Alfine*, with which it has no natural affinity, nor any agreement in botanical character, except having generally but 5 stamina. The genuine species of *Alfine* resemble *Arenaria tenuifolia* in habit, and have undivided petals (a very important mark) and a 3-valved capsule: the plant now under consideration has deeply cloven petals, and a 6-valved capsule, the essential characters, and all the habit, of a *Stellaria*, see our *t.* 92. Nothing is more common than for some plants of a genus to have occasionally, or even constantly, but half their proper number of stamina.

The *Stellaria media* is a common weed in every soil and situation, especially in cultivated ground, flowering from the beginning of spring till the end of autumn; for, though the root is annual, the seedlings mostly stand the winter. The stems are several, prostrate, brittle and slender at the bottom, leafy, marked on one side from joint to joint, but in an alternate manner, with a hairy line, by which decisive character, pointed out by Mr. Curtis, all its Proteus-like varieties (of which we here exhibit two very different ones) may be known at once from every plant of its natural order, and particularly from *Cerastium aquaticum*. Leaves opposite, ovate, entire, smooth, on, longer or shorter, fringed foot-stalks, and folded together at night. Flowers on solitary axillary or terminal stalks, which are hairy on one side. Calyx hairy, longer than the petals. Stamina 10 or 5, rarely but 3, each with a gland at its base. Seeds rough, pale brown.

It is a good vegetable boiled like spinach. Small birds eat the whole herb, as do young poultry.



Jan. 1 1799. Drawn by J. Sowerby London

CERASTIUM aquaticum.

Water Chickweed.

DECANDRIA Pentagynia.

GEN. CHAR. *Cal.* 5-leaved. *Petals* cloven. *Capsf.* of one cell, bursting at the top.

SPEC. CHAR. Leaves heart-shaped, sessile. Flowers lateral, solitary. Fruit drooping.

SYN. *Cerastium aquaticum.* *Linn. Sp. Pl.* 629. *Huds.* 202. *With.* 436. *Relb.* 180. *Sibth.* 147. *Curt. Lond. fasc.* 1. t. 34.

Alpine major repens perennis. *Raii Syn.* 347.

NOT unfrequent in watery places, particularly the margins of rivers and clear ditches, among reeds and bushes, by which its weak stems are supported, flowering in July.

Root perennial, creeping. Stems 2 feet high, weak, procumbent unless supported, branched or forked, leafy, round, clothed all over with prominent glandular hairs; the bark is very brittle, the woody part tough, elastic, and tubular, as in *Stellaria media* and others of this natural family. Leaves opposite, heart-shaped, pointed, waved, entire, hairy, sessile, except some on the younger or radical shoots. Flower-stalks solitary, single-flowered, round, hairy, each springing laterally between the leaves, and from the side of the neighbouring joint of the stem, rather than from between its branches. Calyx-leaves ovate, hairy and viscid. Petals about as long as the calyx, or longer, deeply cloven, white. Stamina always 10, and styles as constantly 5, blunt, hairy on the inside. Capsule ovate, splitting into 5 teeth rather more deeply than in other species of *Cerastium*. Seeds kidney-shaped, rough, pale brown.

Linnaeus, as we have already observed p. 92, once confounded this and the *Stellaria media* with *Stellaria nemorum*. In habit, deep-cut petals, and even the shape of the capsule, though not the number of its valves, this is certainly rather a *Stellaria* than a *Cerastium*; but the 5 styles are never found to vary. Scopoli refers so many *Arenariæ*, *Spergulæ*, and *Cerastia* to his genus of *Stellaria*, that his authority in this case is of no weight.



Gentiana sylvestris

CICHORIUM Intybus.

*Wild Succory.*SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Receptacle* slightly chaffy. *Cal.* surrounded with scales. *Seed* crowned with teeth.

SPEC. CHAR. Flowers sessile, in pairs. Leaves runcinate.

SYN. *Cichorium Intybus.* *Linn. Sp. Pl.* 1142. *Huds.* 348. *With.* 693. *Relb.* 302. *Sibth.* 243. *Curt. Lond. fasc.* 4. t. 56. *Mart. Fl. Rusl.* t. 144.

C. sylvestre. *Raii Syn.* 172.

VERY common in the borders of fields, by road sides, and in all ill cultivated or waste land, preferring however something of a calcareous soil, and flowering in July or August.

Root perennial, fleshy, tap-shaped, often branched, running deep into the ground, milky. Stem 2 or 3 feet high, erect, hard and tough, wand-like, alternately branched, angular above, bristly, producing many flowers, for the most part in pairs, and accompanied by small stem-clasping leaves. The radical leaves are numerous, spreading, long, runcinate, roughish. Flowers sessile, large and handsome, of a brilliant sky blue, rarely white, composed of numerous, ligulate, 5-toothed florets. Common calyx of erect, parallel, linear leaves, with a rough keel, reflexed as the seeds ripen, surrounded at the base with a series of shorter leaves or scales. Receptacle punctate, and scattered with a few chaffy hairs. Seeds angular, crowned with several short chaffy teeth.

When Mr. Curtis described the Wild Succory he considered it as a beautiful but noxious weed, and so it was generally considered. Dr. Withering mentions it as eatable in salads, and that the dried roots will make bread; adding, after the *Amœnitates Academicæ*, that sheep, goats, and swine eat it, but cows and horses refuse it. This last is a mistake. The best account of the agricultural uses of the Succory are in Professor Martyn's too much neglected *Flora Rustica*, where its culture and uses are detailed. I have been an eye-witness to the experiments made in France upon this plant, its luxuriant growth when cultivated, and its value as an early fodder for horses and cows.



CHRYSANTHEMUM fegetum.

*Corn Marigold.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Receptacle* naked. *Seed* bordered. *Cal.* hemispherical, imbricated ; scales membranous at the edge.

SPEC. CHAR. Leaves embracing the stem, glaucous, jagged upwards, toothed at the base.

SYN. *Chrysanthemum fegetum.* Linn. *Sp. Pl.* 1254. *Hudf.* 371. *With.* 735. *Relb.* 321. *Sibth.* 257. *Curt. Lond. fasc.* 6. t. 60. *Dickf. H. Sicc. fasc.* 6. 13. *Mart. Fl. Ruß. t.* 110. *Raii Syn.* 182.

A COMMON weed in corn-fields, particularly troublesome (as Mr. Woodward remarks) among turneps on a sandy soil. It is an annual of quick growth, lasts a long time (from June to August) in flower, and is very prolific. Our English agriculturists agree that it is only to be eradicated by the hand.

Root tapering, slender, not much branched. Stem 2 or 3 feet high, erect, alternately branched, leafy, angular, smooth and glaucous, as is the whole herb. Leaves alternate, embracing the stem, oblong, pointed, more or less cut and jagged, sometimes pinnatifid, in the upper part, while their dilated base is more finely toothed or serrated ; very rarely they are quite entire. Flowers solitary, terminating each branch, which is gradually thickened and naked upwards ; they are large and handsome, of a bright golden yellow. Calyx of numerous scales, of which the innermost are largest and most membranous. Tubular florets of the disk very numerous and small ; ligulate ones of the radius in a simple series, broad and almost inversely heart-shaped, with a tubular base. Seed grooved, and crowned with a membranous border.



OPHRYS spiralis.

*Spiral Ophrys, or Ladies' Traces.**GRNANDRIA Diandria.*

GEN. CHAR. *Nectary* consisting of a lip only, slightly carinated at the back.

SPEC. CHAR. Bulbs clustered, oblong. Stem somewhat leafy. Flowers leaning spirally to one side. Lip undivided, crenate.

SYN. *Ophrys spiralis*. Linn. *Sp. Pl.* 1340. Hudf. 389. *With.* 33. *Relb.* 337. *Sibth.* 12. *Curt. Lond. fasc.* 4. *t.* 59. *Dickf. H. Sicc. fasc.* 10. 17.

Orchis spiralis alba odorata. Raii *Syn.* 378.

MISS Lyfons, to whom we were obliged for a wild specimen of the *Adonis t.* 308, favoured us with this *Ophrys*, which may justly be reckoned among the rarer British plants; for although it grows in many parts of the kingdom occasionally, either on dry gravelly or chalky hills or in meadows, and often in great plenty; it will seldom be found flowering two years together on the same spot, nor perhaps till 8 or 10 years after it has been first observed, notwithstanding the root is perennial. Nor do the leaves constantly appear; or if they do, in some years they speedily wither away. Its flowering season is August or September.

The root consists of several oblong downy bulbs, each appearing to be formed 2 or 3 years before it produces the flowering plant, as in *Satyrion albidum*, *t.* 505; only in the present case those bulbs seem to be produced solitarily, not in pairs. Stem single, 5 or 6 inches high, invested with a few small sheathing leaves. The radical leaves are ovate, spreading, glaucous, smooth, sometimes finely pubescent about the edge. Spike terminal, erect, of many small, greenish-white, sessile, sweet-scented flowers, leaning to one side, but arranged in a spiral line either to the right or left, and each overshadowed by a concave pointed bractea. The whole spike, with its stalk, is downy and viscid. Three upper petals adhering together. Lip oblong, crenate, with an obsolete lobe at the base. What appears to be the stigma is a very peculiar roundish hairy protuberance, with a cloven point, hanging as it were beneath the antheræ. See Dr. Stokes's full description in *Withering*.



Orchis latifolia L.

SCIRPUS maritimus.

*Salt-marsh Club-rush.**TRIANDRIA Monogynia.*

GEN. CHAR. *Glumes* chaffy, imbricated every way, all fertile. *Cor.* none. *Seed* 1, beardless.

SPEC. CHAR. Stem triangular. Panicle clustered, leafy, terminal. Glumes pointed, torn into three segments.

SYN. *Scirpus maritimus.* *Linn. Sp. Pl.* 74. *Huds.* 21. *With.* 77. *Relb.* 20. *Curt. Lond. fasc.* 4. t. 4.

Gramen cyperoides palustris paniculâ sparsâ. Raii Syn. 425.

IN salt marshes, and about the banks of great rivers exposed to the tide, in many different parts of the kingdom, flowering throughout July and August.

The roots are perennial, creeping, knotty at their extremities, sometimes more evidently and constantly so than they are in general; hence the *Cyperus rotundus littoreus inodorus* of Lobel, Ray, and others, has been erroneously described as a distinct species. The stem or straw is erect, from one to three feet high, triangular, striated, leafy, the angles roughish. Leaves linear, carinated, long, rough at the edge, suddenly for the most part contracted to a sharp point; the lower ones sheathing and alternate; those under the panicle sessile, and very unequal in length. Spikes forming a panicle among the upper leaves, more or less numerous, sessile or pedunculated, ovate, chestnut-coloured; sometimes lengthened out into a very long cylindrical figure. Glumes shining, ovate, keeled, ribbed, long-pointed, torn at the summit. Stamina long, with yellow linear antheræ. Seeds triangular, flattest on one side, furnished at the base with one or more short rough bristles; so nearly are the genera of *Scirpus* and *Eriophorum* allied!

Mr. Curtis observes that the roots are very sweet, and would probably afford good and nutritious food for hogs, being larger than those of *S. palustris*, which are collected for that purpose in Sweden.



CAREX dioica.

Small Carex.

MONŒCIA Triandria.

GEN. CHAR. Male, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none. Female, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* inflated, permanent. *Seed* triangular, invested with the corolla.

SPEC. CHAR. Spikes simple, diœcious. Corolla ribbed, finely serrated.

SYN. *Carex dioica.* *Linn. Sp. Pl.* 1379. *Huds.* 401. *With.* 86. *Relb.* 349. *Sibth.* 26. *Gooden. Tr. of Linn. Soc. v.* 2. 139.

Gramen cyperoides minimum, Ranunculi capitulo rotundo. *Raii Syn.* 425.

β. G. cyperoides minus, Ranunculi capitulo longiore. *Raii Syn.* 425.

FOUND in spongy bogs not unfrequently, though it may easily be overlooked. It flowers in May, ripening its seed in June or July, when its round heads are more conspicuous than the flowers.

Root creeping, slender, perennial. Stems ascending, 5 or 6 inches high, simple, slender, roundish, channelled, smooth, leafy below. Leaves sheathing, triangular, smooth, very narrow. Stipula very short and blunt. Spikes linear, erect, obtuse, solitary; the male from one root, the female from another. Scales brownish or rusty-coloured, with a green rib, smooth; those of the female broadest. Stamina slender. Antheræ long, sulphur-coloured. Stigmas two. Seeds spreading, by which the spike becomes ovate or roundish. The permanent corolla is ovate, ribbed on one side, plain on the other, scarcely notched at the tip, its margins finely serrated, especially in the upper part, by which it is readily known from *C. capitata*, a Swedish species not hitherto found in Britain, as Dr. Goodenough in his valuable paper has sufficiently proved; and we readily assent to his opinion, that the two synonyms of Ray above quoted both belong to *C. dioica*.



CISTUS guttatus.

*Spotted-flowered Cistus.**POLYANDRIA Monogynia.*

GEN. CHAR. *Cal.* of 5 leaves, 2 of which are smaller than the rest. *Petals* 5. *Capf.* with 3 valves.

SPEC. CHAR. Herbaceous, without stipulæ. Leaves opposite, lanceolate, three-nerved. Bractææ none.

SYN. *Cistus guttatus.* *Linn. Sp. Pl.* 741. *Huds.* 232. *With.* 491. *Curt. Lond. fasc.* 6. t. 33. *Dicks. H. Sicc. fasc.* 9. 7.

C. flore pallido, punicante maculâ insignito. *Raii Syn.* 342.

THIS short-lived beauty has been observed in sandy pastures of Jersey and the isle of Man. Its petals are expanded to the earliest sunbeams of the morning, but scarcely support their influence for more than 4 or 5 hours, except under a misty or autumnal sky. Long before noon in general they fall off, and the calyx closes. Having no hopes of obtaining wild specimens in a state fit for drawing, we have been obliged, like Mr. Curtis, to have recourse to a garden one, communicated by the Rev. Mr. Watts, F.L.S. of Ashill, Norfolk, in whose choice collection many rare plants the most difficult of culture (which this indeed is not) grow and propagate themselves in all their native luxuriance.

The root is annual. Stem upright, branched, square. Whole herb clothed with slender, white, spreading, soft hairs. Leaves opposite, lanceolate, bluntish, entire, with one principal nerve, and two or more lateral ones. Clusters terminal, simple, their slender partial flower-stalks generally without bractææ, though sometimes they are accompanied by lanceolate ones, smaller than the leaves. Calyx very hairy, and marked with blackish glandular dots. Petals wedge-shaped, unequally crenate, bright yellow, with an elegant purple spot near the base. Stamina short. Stigma sessile. Capsule ovate.

This herb flowers naturally about June and July. It is somewhat viscid, and has a fragrant smell; but our specimens are inferior in both these respects to those produced in the warmer climates of Italy, Spain, and the south of France.



THE HISTORY OF THE

REIGN OF

CHARLES THE FIRST

By JOHN BURNET, BISHOP OF SALISBURY.
 The first part of this history is divided into three books, the second into two, and the third into one. The first book contains the reign of Charles the First from his accession to the throne in 1625, to his death in 1649. The second book contains the reign of Oliver Cromwell from his death in 1658, to his death in 1659. The third book contains the reign of Richard Cromwell from his death in 1659, to his death in 1660.

2
 The second part of this history is divided into three books, the second into two, and the third into one. The first book contains the reign of Charles the First from his accession to the throne in 1625, to his death in 1649. The second book contains the reign of Oliver Cromwell from his death in 1658, to his death in 1659. The third book contains the reign of Richard Cromwell from his death in 1659, to his death in 1660.

FUCUS pedunculatus.

Pedunculated Fucus.

CRYPTOGAMIA Alga.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

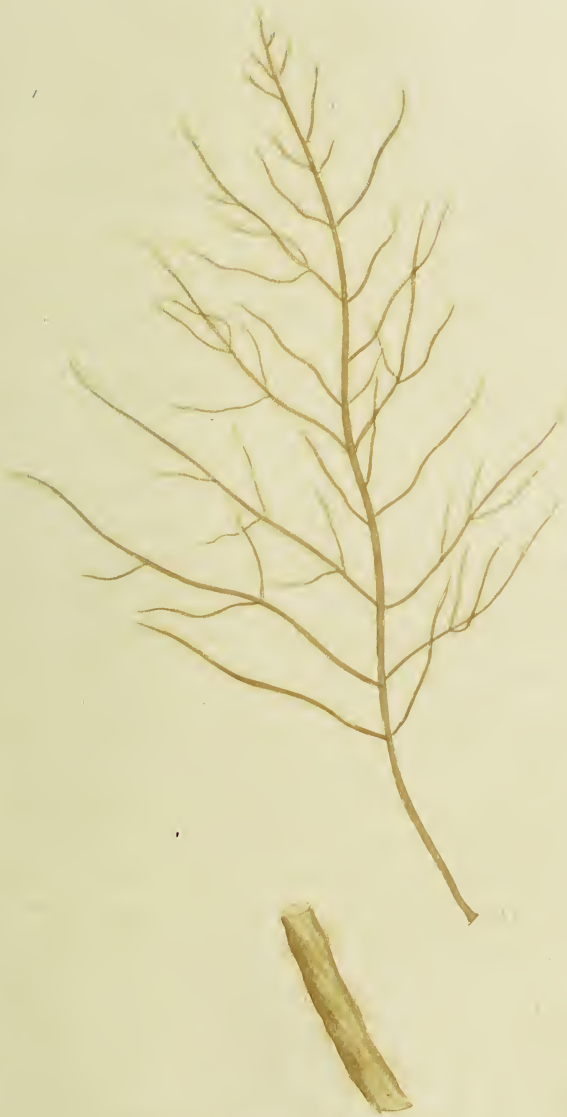
SPEC. CHAR. Stem thread-shaped, simply branched in a pinnate manner. Branches capillary, somewhat two-ranked. Tubercles obovate, scattered, on simple footstalks.

SYN. *Fucus pedunculatus*. *Hudf.* 587. *With.* v. 4. 120. *Goodenough & Woodward in Linn. Tr.* v. 3. 213.

F. Gärtnera. *Gmel. Fuc.* 164. t. 19.

SPECIMENS of this rare and elegant *Fucus* have been sent us from the Yarmouth beach by Mr. D. Turner, along with a drawing most accurately taken by the hand of Mrs. Turner. It is a species hitherto little known. The description of Hudson is imperfect, but there seems no doubt of its being his *pedunculatus*. We think there can be as little uncertainty about Gmelin's synonym, which the authors of the valuable paper in the Linnæan Transactions hesitated to quote, having no original specimens to compare with theirs.

It belongs to that subdivision of the genus whose stems are round or thread-shaped, and is simply branched, the branches being by no means regularly alternate, nor uniformly distant from each other; but they nevertheless spread nearly in two ranks, and are simple, long and capillary, not all of an equal length. There are no leaves. The branches are thickly set with minute oblong or obovate capsules, on simple stalks generally of their own length, and these capsules are for the most part crowned with a spreading tuft of green filaments, which are jointed. The colour of the whole plant besides is a pale brownish olive. No one has yet ascertained whether these filaments certainly belong to the plant, or are a parasitical *Conferva*. Their being jointed, and not always present, favours the latter opinion. Or it is possible the plant may be viviparous, and the filaments its offspring budding out of the capsule; a supposition we should readily adopt, were it not for the joints, which certainly are not to be seen in the stem or branches of the *Fucus* itself.



Juniperus communis L. var. *horizontalis* Moench

1847-1848

1847-1848

1847-1848

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1847-1848

1847-1848

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1847-1848

CONFERVA villosa.

Hairy Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in round, solitary, closed tubercles, projecting from the frond, but united with it.

SPEC. CHAR. Oppositely branched, and obscurely jointed, studded with hairy warts. Branches nearly simple, distant.

SYN. *Conferva villosa.* Hudf. 603. *With.* v. 4. 141.

SENT from Yarmouth beach with the preceding *Fucus*, and accompanied by an equally excellent drawing by the same lady. It is given as the *C. villosa*, on the authority of an original specimen in Sir J. Banks's herbarium. We cannot describe its characteristic marks better than in Mr. Turner's own words.

“ *C. villosa* is one of our scarcest plants, and was hardly ever found at Yarmouth before this summer, 1798. It is a very remarkable link in the chain of marine vegetables, not being jointed in the stem, but studded with knobs like *C. fluviatilis*, while in the youngest shoots there are faint appearances of *dissepimenta*, visible only with a microscope. In texture it is similar to *Fucus pedunculatus* (see t. 545), for which it may easily be mistaken as it lies on the beach, and which it very closely resembles in the down that springs from the knobs in the stem, and which completely covers the lesser shoots. Its branches are few, remarkably opposite, and generally starting from the stem at right angles.”

It is not improbable that the fructification may be situated in the knobs of the stem, and that it may be viviparous, the hairs of those knobs being no other than young plants. This must be confirmed or refuted by repeated examinations made at different seasons of the year.



1847

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CONFERVA byssoides.

Tufted Conferva.

CRYPTOGAMIA *Algæ.*

GEN. CHAR. *Seeds* produced in round, solitary, closed tubercles, projecting from the frond, but united with it.

SPEC. CHAR. Purplish brown, doubly branched, obscurely jointed, thickly set with minute, doubly branched, and finely jointed tufts. Capsules from those tufts, solitary, globose, dark brown.

SYN. *Fucus byssoides.* Gooden. & Woodw. in Linn. *Transf.* v. 3. 229.

FOR this elegant, though not very uncommon, sea weed we are obliged to Mr. D. Turner, who found it on the shore at Yarmouth, with its fructification, in August. In compliance with his opinion and that of the late Mr. Lightfoot, confirmed indeed beyond a doubt by our own examination, we remove it from the *Fuci*, with which Dr. Goodenough and Mr. Woodward, not without hesitation, have associated it. Those gentlemen remark, that though "all the branches seem jointed, "those joints are observable only where there is a branch, or "where one has issued forth;" which however holds good only in the stem and leading branches. This *Conferva* is remarkable for the series of little tufted compound branches, very finely divided, ranged all along its stem and chief ramifications, and the filaments of all these tufts are as completely jointed as those of any other species. They also bear the fructification, which is a small, sessile, globular, pointed, solitary capsule, pellucid in itself, but full of deep-red seeds. The capsule seems to burst at the summit, a character supposed rather to belong to the genus *Fucus*; but we have yet much to learn upon this subject, and the jointed structure of the plant is by common consent for the present taken as the most decisive character of a *Conferva*. The dark parenchymous line is to be seen, as Mr. Turner observes, in this and many other species. In this it is compound, consisting of several parallel lines, like the tubes of the common cane (a species of palm), or still more like the structure of corals and corallines.

All the branches are alternate and gradually smaller upwards. Its colour when fresh is often a bright red,



Fig. 1. 759. *Pinus strobus* L. - 1840. N.Y.

CYCLAMEN europæum.

Spring Cyclamen or Sow-bread.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-shaped, reflexed; tube very short; orifice prominent. *Berry* superior, enclosed in a case.

SPEC. CHAR. Corolla bent backwards. Leaves heart-shaped, angular, finely toothed.

SYN. *Cyclamen europæum.* *Linn. Sp. Pl.* 207. *With.* 235. *Sym. Syn.* 53.

C. vernum. *Ger. em.* 843.

WILD specimens of the *Cyclamen* have been sent us by D. E. Davy, Esq. from a bank in the parish of Bramfield, Suffolk, far from any house or garden, where if not originally a native, it is at least perfectly naturalized. The ground is a wet clay soil, sloping towards the south or west, and is overshadowed with trees. Gerarde was told that this plant had been observed in Wales, Lincolnshire and Somersetshire; but no one has confirmed that report. It is perennial, flowering in April, and in a cultivated state sometimes in autumn.

Root a large roundish knob, throwing out several branched fibres. Leaves all radical, on long foot-stalks, heart-shaped, roundish or oblong, acute, waved, and angular, finely crenate or toothed, veiny, smooth; stained above with white radiated or sinuated spots; purplish beneath. Foot-stalks round, zig-zag, slender at the base. Flower-stalks like them, but longer, simple, naked. Flowers drooping, white, purplish about the mouth, their segments upright, twisted. Stamina very short, not projecting. Antheræ awl-shaped, tawny. Germen superior, roundish. Style awl-shaped. Stigma acute. After impregnation the stalks curl in a close spiral manner, and bury the ripening fruit in the earth.

This pretty plant is easily cultivated in a shady border, and its leaves, which are in their greatest beauty in autumn, are scarcely less ornamental than the flowers. The root is very purgative, and has a nauseous bitter acrid taste, not at first perceived, but very durable. Gerarde believed that merely stepping over this herb caused abortion, and very prudently guarded it in his garden with sticks,



Fed. 722. L. 1818. 1819. 1820. 1821.

V E R B A S C U M Thapsus.

*Great Mullein, or High Taper.*P E N T A N D R I A *Monogynia.*

GEN CHAR. *Cor.* wheel-shaped, a little irregular.
Caps. superior, with 2 cells and 2 valves. *Stamina* bearded.

SPEC. CHAR. Leaves decurrent, woolly on both sides.
 Stem simple.

SYN. *Verbascum Thapsus.* *Linn. Sp. Pl.* 252. *Huds.*
 89. *Willd.* 248. *Retz.* 88. *Sibth.* 77.

V. mas latifolium luteum. *Raii Syn.* 287.

FREQUENT on banks, hedges, and waste ground, more especially on a gravelly or calcareous soil, flowering in July and August.

The root is biennial, spindle-shaped. Stem erect, simple, stiff and straight, from 3 to 5 feet high, leafy, woolly, angular, winged. Leaves alternate, decurrent, oblong, nearly entire, very thickly clothed on both sides with white, branched, intricate, woolly hairs. Spike terminal, erect, cylindrical, dense, many-flowered. Flowers sessile, closely set, bright yellow, rarely white. Stamina yellow, hairy. Antheræ red. Stigma club-shaped.

Mr. Robson communicated to Dr. Withering a mule plant, produced under his own eyes, from this species impregnated by *V. nigrum*. Indeed no genus is more apt to engender such than this.

A pint of cow's milk with a handfull of the leaves of this Mullein, or the *V. pulverulentum*, t. 487, boiled in it to half a pint, sweetened with sugar, strained and taken at bed-time, is a pleasant emollient and nutritious medicine for allaying a cough, and more particularly for taking off the pain and irritation of the piles. The whole herb is mucilaginous, and a little narcotic.



Fig. 1739. Puccinia, 18. 18. 18.

VERBASCUM virgatum.

Large-flowered Mullein.

PENTANDRIA Monogynia.

GEN. CHAR. Cor. wheel-shaped, a little irregular. Caps. superior, with 2 cells and 2 valves. Stamina bearded.

SPEC. CHAR. Leaves oblong-lanceolate, dentate, sessile; the radical ones somewhat lyrate, downy. Stem branched. Flowers clustered, nearly sessile.

SYN. Verbascum virgatum. With. 250. Sym. Syn. 56. Blattaria flore amplo. Ger. em. 778.

DR. STOKES first clearly ascertained this species, which in many respects is closely allied to *V. Blattaria*, t. 393; but we see no reason to think it a variety, nor scarcely a mule, of that, especially as it is copiously propagated by seed, and as the *Blattaria* does not grow where this is found. It is biennial, flowering in September and later. Our worthy friend the Rev. Mr. Baker took this individual plant, when a seedling, from one of the spots near Worcester mentioned in Withering, and it flowered in his garden. He informs us this Mullein was first observed growing plentifully in a field near Wrexham, by Mrs. Nash, who planted it in her garden at Bevere, from whence probably its seeds got to the neighbouring turnpike-road to Ombersley, and from thence to the lane leading to Gregory's mill.

The root is thick, branched. Whole plant much larger and stronger than the *Blattaria*, clothed generally all over, and the lower leaves constantly, with short, prominent, often forked, glandular hairs. Stem 5 or 6 feet high, branched from the bottom, leafy, round, but somewhat angular or winged from the leaves running down it. Radical leaves resembling those of the primrose, but larger, and more or less lyrate; those on the stem oblong-lanceolate, doubly dentate, sessile; the upper ones heart-shaped long-pointed, dentate, sessile, and in some degree embracing the stem. Flowers axillary, clustered, on short woolly stalks, and some of them sessile, large, yellow, purple about the centre, soon falling off. Segments of the calyx ovate, larger and broader than in *V. Blattaria*. Stamina yellow, bearded in the middle with purple.

Mr. Baker has observed that the woolliness of the stem and branches varies in degree, and that weak plants have sometimes solitary flowers, but always on much shorter thicker stalks than the *Blattaria*.





COCHLEARIA officinalis.

*Common Scurvy-grafs.**TETRADYNAMIA Siliculosa.*

GEN. CHAR. *Pouch* turgid, rugged ; valves gibbous, obtuse. *Calyx* spreading, concave.

SPEC. CHAR. Radical leaves roundish ; those on the stem oblong, and somewhat sinuated. Fruit globose.

SYN. *Cochlearia officinalis*. *Linm. Sp. Pl.* 903. *Huds.* 283. *With.* 571.

Cochlearia. *Raii Syn.* 302.

COMMON on the sea-coast in muddy or rocky places, and like the *Statice Armeria*, and a few other sea plants, it is also found in alpine situations far inland. Ray tells us he sowed the seed of the mountain variety, which is smaller, in his garden, where it produced plants of the size and appearance of those that grow on the coast. Yet Dr. Richardson and Dillenius, in the next paragraph of the *Synopsis*, contradict this, saying the plants from Wales and Craven yearly sowed themselves in their gardens, and continued unchanged. Their plant therefore should seem to be *C. grœnlandica*, which by the Linnæan specimen, and one I had long ago from Mr. Curtis's garden, appears to be distinct from *officinalis*.

The common Scurvy-grafs, here delineated from wild Norfolk specimens, varies very much in size and luxuriance. Its root is annual. Stems angular, smooth, branched in a corymbose manner, and in the month of May ornamented with numerous tufts of white flowers. Leaves all smooth and rather succulent ; the radical ones on long footstalks, of a roundish kidney-shape, a little waved or angular ; the stem-leaves are sessile, embracing the stem, alternate, oblong, angular or sinuated. Flowering branches corymbose ; soon lengthened out into spikes. Bractææ none. Calyx-leaves ovate, obtuse, concave. Petals obovate, blunt, entire, with longish claws. Stamina 6, incurved. Pouch globular, crowned with a short style, very slightly rugose, and scarcely perceptibly veined, by which this species is distinguished from the *anglica* and *danica*, whose capsules are elliptical, and very strongly marked with net-like prominent veins.



Fig. 1729. Published by J. Sowerby London.

COCHLEARIA anglica.

*English Scurvy-grafs.**TETRADYNAMIA Siliculosa.*

GEN. CHAR. *Pouch* turgid, rugged : valves gibbous, obtuse. *Calyx* spreading, concave.

SPEC. CHAR. Radical leaves ovate, entire ; those on the stem lanceolate, toothed. Fruit elliptical, reticulated with veins.

SYN. *Cochlearia anglica*. *Linn. Sp. Pl.* 903. *Huds.* 284. *With.* 574. *Fl. Dan. t.* 329.

C. folio sinuato. *Raii Syn.* 303.

NOT unfrequent in a muddy soil on the Norfolk coast, from whence Mr. D. Turner communicated these specimens. It is found also in Essex, Kent, and the south of England, flowering about May. The root is annual. This differs from the *C. officinalis* at first sight in being smaller. Its stem-leaves are narrower, lanceolate rather than ovate, toothed rather than sinuated, and often nearly entire or but slightly waved. The radical ones are very unlike those of the *officinalis*, being much smaller in proportion to the others, lanceolate or ovate, and for the most part perfectly entire. In the flowers of these two plants little difference is to be found ; and indeed their herbage is so variable, that all we have hitherto mentioned would hardly discriminate them ; and Mr. Hudson's conjecture of their being mere varieties might be assented to, did not the fruit afford certain and clear marks of distinction. The pouches of the *C. anglica* are larger than those of the last species, elliptical, crowned with a style one third of their own length ; they are all over strongly marked with a net-work of prominent veins, scarcely at all to be perceived in those of the more common kind.

C. danica differs from both these in its triangular leaves, which all stand on footstalks. Its fruit agrees with *C. anglica*.



LEONTODON palustre.

*Marsh Dandelion.*SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked. *Calyx* imbricated with flaccid scales. *Down* simple, on a footstalk.

SPEC. CHAR. Outer scales of the calyx shorter, upright, ovate. Leaves sinuated and toothed, nearly smooth.

SYN. *Leontodon palustre.* *Lyons. Fasc.*

L. Taraxacon. *With. 679. Hudf. 339 δ.*

IN the present volume, *t.* 510, we have expressed an opinion that this plant was merely a variety of the common Dandelion; but since that article was written, a more accurate examination of wild specimens, as well as of others raised from seed sent from Cambridgeshire by the Rev. Mr. Hemsted, has convinced us of our error, and we therefore lose no time to acknowledge it.

The Marsh Dandelion grows generally on moors or wet commons. It was originally observed on Hinton Moor, Cambridgeshire, and has been found on the Lower Common at Heydon, Norfolk, by the Rev. Mr. Bryant, flowering in June or July.

Root perennial, tap-shaped. Whole herb more slender and delicate than the common species. Leaves very various, slightly hairy, often quite smooth, scarcely runcinate, or with their teeth pointing backwards, but more or less deeply pinnatifid and dentate. Flower bright yellow, externally striped with red or purple. Calyx scales gradually smaller outwards, and all erect, or rather closely pressed to each other, the lower ones ovate, not linear. Head of seeds about half the size of *L. Taraxacum*. The calyx scales being none of them reflexed, and the leaves being less runcinate, distinguish it from the most starved varieties of the *Taraxacum*, such as the β of Hudson figured by Petiver,



HEDYPTHOIS hispidum.

*Rough Hedythois.*SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked, punctate. *Cal.* imbricated, with scales at the base. *Down* feathery, sessile, unequal.

SPEC. CHAR. Stalks single-flowered. Leaves dentate, rough. Florets hairy at their orifice, glandular at the tip.

SYN. *Hedythois hispidum.* *Huds.* 340.

Leontodon hispidum. *Linn. Sp. Pl.* 1124. *With.* 681.

Relb. 295. *Sibth.* 239. *Curt. Lond. fasc.* 5. t. 56.

Dens leonis hirsutus leptocaulis, *Hieracium dictus.*

Raii Syn. 171.

PLENTIFUL in pastures, on a chalk or limestone soil more especially, flowering in July.

Root perennial, tapering, oblique, blackish. Leaves radical, oblong, tapering at the base, bluntish, more or less deeply toothed, and sometimes pinnatifid, clothed with generally forked rigid hairs. Stalks several, upright, simple, roundish, clothed with similar hairs. Flower drooping while in bud, afterwards erect, bright yellow. Calyx-scales erect, unequal and irregular, hairy. Florets furnished with a tuft of long yellow erect hairs at the top of their tube; their summit terminates in 5 teeth, at the back of each of which is a triangular cluster of brown glands, first observed I believe by Mr. Sowerby. The seeds are uniform, slender, each crowned with a spreading tuft of sessile feathery down, whose rays are unequal.

In the full-blown flower the hairs from the orifice of each floret may readily be perceived, and distinguish this plant from the *H. hirtum*, and every other with which it could be confounded.



HEDYPTHOIS hirtum.

Deficient Hedythois.

SYNGENESIA Polygamia-æqualis.

GEN. CHAR. *Recept.* naked, punctate. *Cal.* imbricated, with scales at the base. *Down* feathery, sessile, unequal.

SPEC. CHAR. Stalks single-flowered. Leaves dentate, rough. Calyx nearly smooth. Outer row of seeds destitute of down.

SYN. *Hedythois hispidum* β. *Huds.* 340.

Leontodon hirtum. *Lin. Sp. Pl.* 1123. *Willd.* 682.

Sibth. 238. *Curt. Lond. fasc.* 6. t. 59.

Hieracium pumilum saxatile asperum, præmorsâ radice. *Raii Syn.* 167.

MANY botanists have doubted whether this were a different species from the *H. hispidum*. Mr. Hudson makes them varieties only, but Linnæus always insisted on their being distinct. Unfortunately the character he pointed out is fallacious, the simple hairs; for the pubescence of both is occasionally simple, forked, or even three-pointed. In herbage they nearly agree, or at least the varieties of each closely approach each other. The flowers of both droop in the bud, but those of *H. hirtum* are the smallest. The calyx is very nearly smooth. The florets are destitute of the yellow hairs at their orifice, and of the brown glands at the back of their apex, and the innermost have a less perfect corolla than those of the circumference; while on the contrary the seeds produced by the innermost are crowned with large sessile feathery down, and those of the circumference are almost beardless, having only a few short jagged scales at their summit. The root of this species is bitten off, not tapering as in the other.

This *Hedythois* is frequent on gravelly heaths and commons, flowering in July and August. Mr. Curtis observes that it seldom occurs on the same spot with the preceding.

We adopt this genus of *Hedythois* from Mr. Hudson. What Jussieu and Gærtner have called by the same name is the *Zacyntba* of Schreber's *Gen. Pl.* 534.



Feb. 1799 Published by J. Sowerby

PASTINACA sativa.

Wild Parsnep.

PENTANDRIA Digynia.

GEN. CHAR. *Fruit* elliptical, compressed almost flat.
Petals involute, entire. *Involucra* neither general
 nor partial.

SPEC. CHAR. Leaves simply pinnate, downy beneath.

SYN. *Pastinaca sativa*. *Linn. Sp. Pl.* 376. *With.* 309.
Mart. Fl. Russt. t. 83.

P. sylvestris. *Hudf.* 125. *Relb.* 122. *Sibth.* 101.
Abbot 67.

P. sylvestris latifolia. *Raii Syn.* 206.

THE wild Parsnep is found in the borders of fields and by road sides, plentifully enough on a calcareous or chalky soil, but not on any other, flowering in July, and the root is biennial. We received it from Norfolk by favour of the Rev. Mr. Watts.

Root spindle-shaped, white, aromatic, sweet, with a degree of acrimony. Stem 3 feet high, erect, branched, angular, furrowed, roughish. Leaves pinnate, with footstalks dilated at the base; leaflets from 5 to 9, sharply serrated and somewhat cut, downy beneath; the odd one in three lobes. Umbels terminal, solitary, erect, of several roughish rays. Involucrum in general altogether wanting, but sometimes a small solitary leaf occurs at the base of the general, as well as partial, flower-stalks; for it is well known to practical botanists that this part affords by no means such certain generic characters in umbelliferous plants as Linnæus and Artedi thought, the seeds being more to be trusted. The flowers are small, with deep-yellow petals rolled inwards. Fruit large, elliptical, flat, ribbed, smooth, of a very light brown when ripe.

The garden parsnep is a cultivated variety of this, with larger smoother leaves, and a mild eatable root. There is no reason to change the Linnæan name *sativa*, which expresses that this is the species which is cultivated.



Tab. 1. 1799. Published by J. Swanby.

FONTINALIS minor.

Lesser Water-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Capsule* with a lid and veil, sessile, enclosed in an imbricated calyx.

SPEC. CHAR. Leaves ovato-lanceolate, concave, acute, in three ranks. Fructification terminal. Calyx-leaves pointed.

SYN. *Fontinalis minor*. *Linn. Sp. Pl.* 1571. *Huds.* 468. *With.* 788. *Abbot* 231. *Dicks. Dr. Pl.* 17.

F. minor, foliis triangularibus, minus complicatis, capitulis in summis ramulis sessilibus. *Dill. in Raii Syn.* 79.

F. triangularis minor carinata, e cymis capsulifera. *Dill. Musc.* 257. *t.* 33. *f.* 2.

A FIGURE of the most common *Fontinalis* has been given in our *t.* 359. The *minor* is a much more rare species, and is chiefly found on the walls which embank the Thames at Lambeth; and from thence, here and there, up to Wandsworth or further. The Rev. Mr. Abbot sent this specimen from the mill-dam at Oakley, Bedfordshire, the place indicated in his *Flora Bedfordiensis* lately published.

This agrees with the above-mentioned species in habit, but its stems and branches are shorter, and leaves not so compressed. Its essential differences however reside in the fructification, which is terminal, not lateral; the capsules are more slender, and stand on much more evident footstalks within the calyx, in which respect they disagree somewhat with the generic character; the calyx-leaves moreover are sharp-pointed, not blunt as in the *F. antipyretica*.

Linnaeus characterizes this moss "*foliis passim geminis*," and adds underneath "*folia in ramis crassioribus gemina*;" which explains his meaning, that the leaves are now and then, or here and there, in pairs. His erroneously using the word *passim*, as Mr. Hudson does, to express something of rare occurrence, whereas it means the reverse, a thing found at every step, has led Dr. Withering and Mr. Abbot into a mistaken translation of the specific character in question.



B R Y U M extinc̄torium.

Extinguisher Bryum.

CRYPTOGAMIA Musci.

GEN. CHAR. *Capsf.* with a lid. *Veil* smooth. *Fruit-stalk* from a terminal tubercle.

SPEC. CHAR. Capsule cylindrical, entirely covered by the bell-shaped beaked veil. Leaves lanceolate, with a strong rib, entire.

SYN. *Bryum extinc̄torium*. *Lim. Sp. Pl.* 1581. *Huds.* 475. *With.* 816. *Relb.* 402. *Dickf. H. Sicc. fasc.* 8. 18. *Abbot* 239.

B. erectis capitulis, calyptrâ laxâ conicâ, foliis Scrpilli pellucidis angustioribus. Raii Syn. 92.

B. calyptrâ extinc̄torii figurâ minus. Dill. Musc. 349. *t.* 45. *f.* 8.

Encalypta vulgaris. Sibth. 277.

FOUND under the shade of rocks or walls in a dry sandy soil in many different places, perfecting its capsules in March and April. Mr. Teesdale F. L. S. communicated it to us.

Root fibrous. Plants growing in tufts, generally simple and short, with a few thick-set, lanceolate, entire leaves, curling in when dry, and furnished with a very strong round reddish midrib. Stalk about an inch high, red. Capsule cylindrical, bluntish, with a slender cylindrical beak, and very minute teeth round the orifice. The pale semitransparent veil best distinguishes this species; it is beaked at the top, bell-shaped, cut off horizontally below, and hangs down much below the base of the capsule.

The plant figured by Dillenius *t.* 45. *f.* 9, is esteemed a variety by Linnæus, Hudson, and Withering, though Hedwig makes it a species. It is in every part more luxuriant, the stem branched, mouth of the capsule more evidently fringed, and veil torn at the base into about 6 segments. In other respects it agrees, except in flowering later; for the difference of retaining its colour when dried we have found to be fallacious, the common *B. extinc̄torium* when quickly dried remaining as green as any moss whatever for many years.



MERCURIALIS annua.

*Annual Mercury.**DICECIA Enneandria.*

GEN. CHAR. Male. *Cal.* three-cleft. *Cor.* none.

Stam. 9 to 12. *Antheræ* globose, double.

Female. *Cal.* three-cleft. *Cor.* none. *Styles* 2.

Caps. double, 2-celled. *Seeds* solitary.

SPEC. CHAR. Stem cross-branching. Leaves smooth. Flowers spiked.

SYN. *Mercurialis annua.* *Linn. Sp. Pl.* 1465. *Huds.*

435. *With.* 392. *Relb.* 372. *Sibth.* 134. *Curt.*

Lond. fasc. 5. t. 68.

M. annua glabra vulgaris. *Raii Syn.* 139.

A VERY frequent weed in cultivated ground about Norwich, as well as London, and several other towns, flowering in the autumn.

Root annual, branching. Herb smooth, of a darkish but shining green, foetid, with a smell something like elder. Stem more or less branched, angular and ribbed, the branches crossing each other; the joints a little swelled and polished. Leaves on footstalks, opposite, ovate, acute, serrated. Male flowers in axillary solitary spikes, clustered, green. Female flowers on a separate plant, axillary, on simple flower-stalks, about two together, sometimes accompanied by a male flower seemingly imperfect. Seed-vessel a double or twin prickly capsule, each part formed of two concave valves, and containing one smooth seed.

This cannot be confounded with the perennial Mercury so common in woods and hedge bottoms, whose stem is simple, root creeping, and leaves rough, and which is supposed to be a much more poisonous plant. Indeed we would advise the present species to be used, if at all, with great caution. Ray speaks of it as emollient and cleansing, and says it is of very frequent use in injections. He adds, that it takes off warts: a sufficient contradiction of its emollient reputation. In fact, it belongs to the same natural order as the *Euphorbia*, one of the most virulent plants we have, and very nearly agrees with it in sensible qualities.



March 1. 1739 Published by J. Sowerby London.

RUSCUS aculeatus.

*Butcher's Broom.**DICEIA Syngenesia.*

GEN. CHAR. Male. *Cal.* of 6 leaves. *Cor.* none. *Nectary* ovate, tubular, bearing the stamina. Female. *Cal. Cor.* and *Nect.* as in the male, but without stamina. *Style* 1. *Berry* 3-celled. *Seeds* in pairs.

SPEC. CHAR. Leaves ovate, sharply pointed, flowering on the upper side without a leaflet. Branches straight.

SYN. *Ruscus aculeatus.* *Linn. Sp. Pl.* 1474. *Huds.* 437. *With.* 68. *Relb.* 374. *Sibth.* 22. *Smith in Linn. Transf.* v. 3. 334.

Ruscus. *Raii Syn.* 262.

ALTHOUGH not very common, the Butcher's Broom is found on shrubby heaths and in thickets in so many parts of England, as to render the indication of any particular place superfluous. It flowers in March and April, and the root is perennial. The plant itself is biennial, and for one winter evergreen. However rigid and firm in texture, it is truly herbaceous, dying down to the root after ripening its fruit. The whole plant is devoid of pubescence. Stems about 2 feet high, round, striated, branched, straight and rigid. Leaves alternate, spreading in every direction, twisted, hard, ovate, entire, tipped with a sharp thorn, bearing a solitary flower about the middle of their upper side, whose flower-stalk, as Mr. Woodward has well observed, runs down within the outer coat of the leaf to its base. Calyx of 6 green leaves, the intermediate ones smallest, Nectary purplish, tubular, swelling, bearing on its edge three combined antheræ, and enclosing the rudiments of an abortive germen. The female flowers grow on a separate root, and have no antheræ. Germen elliptical, with a blunt nearly sessile stigma. Berry globular, large, scarlet, with a sweet pulp, enclosing one or two large, shining, globular, almost transparent seeds, for most of the rudiments of the seeds, originally six, prove abortive.

The root has been used medicinally to remove obstructions of the liver principally; one certain use of the plant at least is its removing all obstructions from the unequal surface of a butcher's block, as expressed in the English name.



POTENTILLA aurea.

*Golden Cinquefoil.**ICOSANDRIA Polygynia.*

GEN. CHAR. *Cal.* in 10 segments. *Petals* 5. *Seeds* roundish, naked, generally wrinkled, affixed to a small dry receptacle.

SPEC. CHAR. Radical leaves in fives, obovate, deeply serrated, hairy, somewhat membranaceous: stem-leaves ternate. Stem nearly erect.

SYN. *Potentilla aurea*. *Linn. Sp. Pl.* 712. *With.* 475. *Fl. Dan. t.* 114.

Quinquefolium minus, flore aureo. *Ger. em.* 990.

POTENTILLA aurea is first introduced upon the list of British plants in Dr. Withering's new edition, on the supposition of its being the *Pentaphyllum parvum hirsutum* of Ray's Synopsis, referred by Hudson to *P. opaca* of Linnæus. But Mr. Curtis is most probably right in referring Ray's plant to the *verna*, of which we were not aware when that species was described in our 1st volume. We therefore now introduce the real *aurea* as a new acquisition to the Flora, having been gathered in 1793 on Ben Lawers and other mountains in Breadalbane by Mr. John Mackay, from whom we received it. The root is perennial, and it flowers in the middle of summer.

The stems are from 3 to 6 inches high, nearly erect, branched, leafy, hairy. Leaves thin and almost membranous, of a lighter green than in *P. verna*, with footstalks more than twice as long as in that plant; the leaflets are 5, a little shining, somewhat hairy, paler beneath, and deeply serrated towards the top. The stem-leaves consist of but 3 leaflets, with shorter stalks, the upper ones generally opposite. Stipulæ lanceolate, entire. Flower-stalks axillary and terminal, solitary, long, single-flowered, hairy, erect. Calyx hairy, its segments all nearly equal in length, but alternately narrower. Petals heartshaped, of a full yellow and almost orange colour. Seeds longitudinally wrinkled, which Gærtner considers as a distinguishing character of this genus.

Mr. Mackay thinks he has discovered another new *Potentilla* in the highlands, with which we hope in due time to make the public acquainted.



MYRICA Gale.

*Sweet Gale, or Dutch Myrtle.**D I Œ C I A Tetrandria.*

GEN. CHAR. Male. *Catkin* with concave scales. *Cor.*
 none. Female. *Catkin* with concave scales. *Cor.*
 none. *Styles* 2. *Berry* with 1 seed.

SPEC. CHAR. Leaves lanceolate, with shallow serratures. Stem shrubby.

SYN. *Myrica Gale.* *Linn. Sp. Pl.* 1453. *Huds.* 432.
With. 208. *Relb.* 368. *Fl. Dan. t.* 327.

Gale frutex odoratus Septentrionalium, *Elæagnus*
Cordo. *Raii Syn.* 443.

THIS delightfully fragrant shrub grows copiously in bogs on a gravelly soil, as at Woodbastwick, Norfolk, and at Dersingham in the north-east corner of the same county, where our wild specimens were gathered by the Rev. Mr. Sutton. We have received others gathered on Windlesham moor near Bagshot, by the Rev. Mr. Abbot; and from Mr. Templeton of Belfast we have been favoured with monœcious ones, though in general the male catkins grow on different plants from the female ones. In March the catkins are fully formed; in May the flowers are in perfection; in August or September the branches are laden with ripe fruit, whose surface is sprinkled with shining resinous particles, easily rubbing off, and diffusing a scent something like red cedar. After the fruit has been kept dried 20 years it communicates to the fingers the smell of candied citron peel. In the north of Europe Linnæus tells us it is used for brewing instead of hops by poor people, and that wax may be obtained from it by boiling, as from *M. cerifera*.

This shrub grows to the height of 3 or 4 feet, and is much branched. Leaves deciduous, aromatic, alternate, lanceolate, tapering at the base, slightly ferrated in the upper part, nearly smooth, paler beneath. Catkins lateral, alternate. We can scarcely call their scales, as Linnæus does, lunate; they are rather heartshaped and pointed. Stamina 4, brown, as are also the styles. Mr. Sowerby observed the first scales of the female catkin to be hairy towards the tip, by which they may be distinguished even in the bud.



March 1. 1799 Published by J. L. Sowerby-London.

ERIOPHORUM polytachion.

*Broad-leaved Cotton-grass.**TRIANDRIA Monogynia.*

GEN. CHAR. *Glumes* chaffy, imbricated on all sides.
Cor. none. *Seed* 1, invested with very long hairs.

SPEC. CHAR. Stem round. Leaves flat. Spikes several, on flower-stalks.

SYN. *Eriophorum polytachion.* *Linn. Sp. Pl.* 76.
Dickf. Tr. of Linn. Soc. v. 2. 289. *H. Sicc. fasc.* 4. 1.
With. 72. *Leers t.* 1. f. 5.

Linagrostis paniculâ minore. *Vaill. Par. t.* 16. f. 2.

OBSERVED by Mr. Dickson on bogs in Northamptonshire, afterwards near Dunstable, Bedfordshire, in Yorkshire, Cumberland, and very commonly in Scotland, from whence we received it by favour of Mr. Mackay. It is perennial, flowering in April, and bearing its white tufts of seeds from June to August or September.

Root fibrous, not creeping. Stem erect, 2 feet high, round, striated, smooth, leafy. Leaves alternate, much shorter than the stem, flat, slightly keeled, linear-lanceolate, smooth, towards the top more acutely keeled, sheathing at the base. The floral leaves are 2 or 3, dilated and membranous at their base. Spikes several, ovate, on stalks, which are sometimes branched, as in our figure, but more frequently simple. Glumes lanceolate, filmy. After flowering, the flower-stalks are lengthened out, and the spikes are pendent; the white hairs which invest the seed also grow out to a considerable length, though less so than in the more common species, figured in our next plate, which was always in England confounded with this till Mr. Dickson distinguished them.

The down of both species is used in poor mountainous countries for stuffing pillows, but there is a prevailing opinion of its not being wholesome to sleep on. It is too brittle to be manufactured into thread of any kind.



ERIOPHORUM angustifolium.

Common Cotton-grass.

TRIANDRIA Monogynia.

GEN. CHAR. *Glumes* chaffy, imbricated on all sides.*Cor.* none. *Seed* 1, invested with very long hairs.

SPEC. CHAR. Stem round. Leaves channelled, triangular at the tip. Spikes several, on flower-stalks.

SYN. *Eriophorum angustifolium.* Hoffm. *Fl. Germ.* 19:
Dicks. Tr. of Linn. Soc. v. 2. 289. *H. Sicc. fasc.* 4. 2.
With. 72.*E. polystachion.* Hudf. 21. *Relb.* 20. *Sibth.* 24.
Curt. Lond. fasc. 4. t. 9.*Linagrostis.* Raii *Syn.* 435.*L. paniculâ majore.* Vaill. *Par. t.* 16. f. 1.

VERY common and plentiful on turfy bogs, flowering in April, and its brilliant white tufts look, throughout the summer, like feathers scattered over the country. Root creeping. Stem round, more slender than the last, striated, smooth. Leaves but little shorter than the stem, semicylindrical, channelled, smooth, narrower than in *E. polystachion*, sheathing at the base, terminating in a triangular point; the floral ones 2 or 3, linear, flat, various in length. Spikes from 3 to 5, ovate, on stalks of different lengths, but always (as far as we have seen) simple. Glumes brown with a filmy edge. After flowering, the spikes are partly erect, partly drooping, but by no means pendent, and the white hairs are protruded to full twice the length of the kind last described, which renders this much more conspicuous and handsome.

Cattle feed readily upon the leaves of this grass in the northern countries early in the spring, before other herbage is sufficiently advanced, but in more favourable climates it is not worth the farmer's notice.



... 1799 Published by J. Sowerby London.

SOLANUM Dulcamara.

Woody Nightshade, or Bitter-sweet.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-shaped. *Antheræ* slightly connected, opening by two pores at the top. *Berry* superior, two-celled.

SPEC. CHAR. Stem shrubby, zigzag, without thorns. Upper leaves hastate. Clusters cymose.

SYN. *Solanum Dulcamara.* *Linn. Sp. Pl.* 264. *Huds.* 93. *With.* 253. *Relh.* 91. *Sibth.* 78. *Curt. Lond. fasc.* 1. t. 14. *Woodv. Med. Bot.* t. 33.

S. lignosum, seu *Dulcamara.* *Raii Syn.* 265.

A NATIVE of hedges and shady places where the soil is moist, flowering in June and July.

The woody, branched, twisted stem climbs to the height of several feet. Leaves alternate, on footstalks, entire, smooth, except on the sea shores, where they are hairy; the lowermost are heartshaped and undivided; the uppermost more or less completely halberdshaped. Clusters opposite to the leaves or terminal, having the general appearance, but not the structure, of a cyme, drooping. Flowers very elegant, purple, with two green dots at the base of each segment, and large yellow antheræ. Berries oval, scarlet, very juicy, bitter and poisonous.

The young branches, or the root, employed in a decoction, are much celebrated by some practitioners for removing various obstructions, promoting expectoration, and are useful in obstinate coughs as well as rheumatic disorders.

This medicine is to be cautiously administered in small doses and diluted with milk, especially in the beginning, it being sometimes liable to produce vomiting, convulsions and delirium. See Woodville. Mr. Saunders, author of an elegant Introduction to Botany published in 1792, has, in the course of an extensive country practice, used the *dulcamara* with great success, and without the inconveniences just mentioned.



March 1. 1790. Friedrichshagen, 1. Stuebe, London.

SOLANUM nigrum.

Common or Garden Nightshade.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-shaped. *Antheræ* slightly connected, opening by two pores at the top. *Berry* superior, two-celled.

SPEC. CHAR. Stem herbaceous, without thorns. Leaves ovate, bluntly toothed and waved. Umbels lateral, drooping.

SYN. *Solanum nigrum.* *Linn. Sp Pl.* 266. *Hudf.* 92. *Witb.* 254. *Relb.* 91. *Sibth.* 78. *Curt. Lond. fasc.* 2. *t.* 14.

S. vulgare. *Raii Syn.* 265.

COMMON every where in cultivated as well as waste ground, more especially on dunghills, thriving most in a rich soil, and flowering from June to September.

Root annual, much branched. Stem branched, spreading, leafy, angular, sometimes winged, and often of a woody hardness; for in our mildest seasons, as in hot climates, it survives the winter. Leaves alternate, on footstalks, ovate, waved, lengthened out at the base, somewhat downy. Umbels lateral, from the interstices of the stem between the leaves, drooping, downy, bearing a few white musky-scented flowers. Berries black, globular. Hudson mentions their being sometimes yellow.

The whole herb is fœtid, narcotic, celebrated for promoting perspiration and urine, but to be used with great caution. An infusion of from one to three grains of the dried leaf, is said to be amply sufficient for a dose, a larger quantity occasioning violent sickness, with head-ach, giddiness, and other dangerous symptoms. An ointment made of these leaves and hog's lard was used by Solano de Luque, a famous Spanish physician, about two centuries since, in the cure of consumptions. The patient was to be buried for some time up to the chin in the earth, and afterwards rubbed with this ointment. See Dr. Simmons's Observations on the Treatment of Consumptions. Few practitioners now would expect any good from this prescription, at least as far as the nightshade is concerned.



SCROPHULARIA vernalis.

*Yellow Figwort.**DIDYNAMIA Angiospermia.*

GEN. CHAR. *Cal.* 5-cleft. *Cor.* somewhat globose, reversed. *Caps.* superior, two-celled.

SPEC. CHAR. Leaves heartshaped, doubly serrated, downy. Flower-stalks axillary, solitary, forked, leafy.

SYN. *Scrophularia vernalis.* *Linn. Sp. Pl.* 864. *Huds.* 275. *Witb.* 554. *Fl. Dan. t.* 411.

S. flore luteo. *Ger. em.* 717.

THIS grows in shady moist places, but rarely, flowering in April and May, and the root is biennial. Mr. Sowerby gathered it near Bury, in company with Sir Thomas Cullum, and has also received wild specimens from a lane leading from Merton Abbey to Mitcham, Surrey, by favour of the Rev. Mr. Lysons, the learned and elegant illustrator of the environs of London.

Stem hairy, about two feet high, square or five-angled, and in the latter case the leaves grow three together, as Linnæus in his manuscripts defines them; but they are full as often opposite. They are heartshaped, pointed, sharply and doubly serrated, veiny, most hairy beneath, and stand on footstalks. Flower-stalks axillary, about as long as the leaves, solitary, forked, bearing many flowers accompanied by serrated or entire bractæ. Calyx hairy. Corolla inflated, yellow, contracted at the mouth. Capsule ovate, acute, with many minute seeds.

It is curious to observe a certain resemblance or affinity between this plant and the pretty Peruvian genus of *Calceolaria*, one species of which, the *pinnata*, is now frequent in our gardens; the fruit and seeds, the calyx, the habit and hue of the whole plant, strikingly agree: and there is another species, *C. ovata*, between which and this *Scrophularia* the conformity is still greater; so that a somewhat different form of corolla, and the *Calceolaria* having but 2 stamina, are their only generic distinctions. In every thing else they are very much nearer akin than this and other species of *Scrophularia*.



March 1. 1799 Published by J. Lowrey London.

OROBANCHE elatior.

*Tall Broom-rapè.**DIDYNAMIA Angiospermia.*

GEN. CHAR. *Cal.* in 2, lobed, lateral segments. *Cor.* ringent. *Capf.* of 1 cell, with 2 valves, and many seeds. A gland at the base of the germen beneath.

SPEC. CHAR. Stem simple. Corolla tubular; lower lip in three acute equal segments. Stamina downy. Style smooth.

SYN. *Orobanche elatior.* *Sutton Tr. of Linn. Soc. v. 4. 178. t. 17.*

THE Rev. Mr. Sutton, of Norwich, first observed and well ascertained this species, and he has favoured us with the use of the original drawing, made under his inspection, in order to complete our history of the genus as far as it is known in England.

The *O. elatior* has hitherto been confounded with the *major*; *t. 421*, for it occurs full as frequently as that in fields, thickets, and hilly bushy places on a gravelly soil, flowering in July and August.

It differs from *O. major*, in being taller, more yellowish, and with a much longer and more numerous spike of flowers; Mr. Sutton having sometimes counted above 100. The root generally adheres to that of *Trifolium pratense*, or *Centaurea Scabiosa*. The leaves of the calyx are united at the base before. The corolla is less inflated; its border is much curled and fringed; its upper lip sometimes a little cloven. The stamina, so useful in characterizing the species of *Orobanche*, are inserted into the tube above its base, and are downy on the inside from the bottom upwards for half their length, being smooth in the upper part, not clothed with glandular roughness as in *O. major*. The germen and style, which in that are downy, in this are smooth. Stigma inversely heartshaped, yellow.—The *O. minor*, *t. 422*, has a purple stigma, the stamina ciliated, not clothed with hairs, the middle segment of the lower lip lobed and undulated, the calyx of two separate leaves, and the whole plant is a great deal smaller.



F U C U S loreus.

Thong Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond repeatedly forked, compressed, acute, smooth, sprinkled with tubercles on each side.

SYN. *Fucus loreus.* *Linn. Syst. Veg. Ed. 14.* 968.
Huds. 583. *With.* v. 4. 96. *Gooden. & Woodw.*
Tr. of Linn. Soc. v. 3. 176.

F. elongatus. *Linn. Sp. Pl.* 1627.

F. longo angusto crassoque folio. *Raii Syn.* 43.

F. fungis affinis. *Raii Syn.* 43, in a young state.

THIS *Fucus* is found growing upon submarine rocks on the south coast of England, and is thrown upon the Yarmouth beach by very strong easterly winds only, in the winter months, during which it is in fruit. Hence Mr. D. Turner, from whom we received specimens, justly concludes it not to be really a native of our Norfolk shores, more especially as *F. ovalis* and *articulatus* are found attached to its root, which are never seen at Yarmouth otherwise.

The frond grows to the length of 2 or 3 yards or more, and very much resembles a leather thong, except in being repeatedly dichotomous. Tubercles of seeds are scattered over it on both sides. The most essential distinction of the species consists in a dilated cup (like some kinds of *Peziza*) which is first formed, and from the centre of which the fronds grow out, either solitary or in pairs. This is sufficiently expressed in our figure. A variety mentioned in the *Linn. Transf.* is smaller, generally narrower, less branched, and the angles of the branches are more obtuse.

Mr. Turner observes, that “the frond is in the central part “pulpy, and full of capillary colourless entangled fibres, invisible without a microscope. When this plant has been 2 “or 3 days out of the sea, a yellow mucus exudes from its “pores, similar to what Reaumur mistook for *anthææ* in *F. ferratus* and others. The seeds are discharged in the same “manner. *F. loreus* is a connecting link between *Fucus* and “*Ulva*, agreeing greatly in texture as well as fructification “with *U. diaphana*.”



March 1. 1770. *Stem of P. lenticula* Linn.

F U C U S nodosus.

Knobbed Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond somewhat forked, compressed, here and there inflated into oval bladders. Fructification on obovate leaves.

SYN. *Fucus nodosus.* *Linn. Sp. Pl.* 1628. *Huds.* 584. *With. v. 4.* 84. *Gooden. and Woodw. Tr. of Linn. Soc. v. 3.* 190.

F. maritimus nodosus. *Raii Syn.* 48.

A VERY common *Fucus* upon all our coasts, generally washed up by the tide plentifully in the mouths of great rivers. It bears its fructification in December.

The fronds are three or four feet long, flat, leathery, olive-coloured, forked, and when full grown are swelled out, at the distance of every 2 or 3 inches, into a solitary elliptical bladder, full of air, and occupied also by a few white slender cobweb-like filaments, formed merely of the central pulpy substance of the plant. Numerous flattish obovate pale-olive processes grow out of the edges of the frond, upon footstalks, in an alternate order, which have been called leaves, not with exact propriety, for they are destined chiefly to produce the fructification, with which they are thickly clothed on both sides. The clusters of seeds, when cut across, are of a full yellow or orange colour.

This species can be confounded with no other. The oval bladders, which crack with a sharp report when trodden upon, and the peculiar situation of the fructification, both clearly distinguish it.



March 1. 1799 Published by J. Bourque-Durand.

F U C U S asparagoides.

*Asparagus Fucus.*CRYPTOGAMIA *Algæ.*

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond round, thread-like, much branched. Ultimate branches bristle-shaped, opposite. Tubercles globular, on footstalks, solitary, alternately opposite to the little branches.

SYN. *Fucus asparagoides.* *Woodw. Tr. of Linn. Soc. v. 2. 29. t. 6. Gooden. and Woodw. Tr. of L. Soc. v. 3. 214. With. v. 4. 117.*

FOUND on the beach at Yarmouth from June to November, though seldom in abundance, bearing its fruit chiefly in August and September. Mr. Wigg first discovered it, and gave it to Mr. Woodward, whose description, with a figure, may be found in the Linn. Society's 2d volume. The name not unaptly expresses the general form of the plant, which in some measure, though not precisely, recalls the idea of a miniature garden *Asparagus* in fruit.

It grows about a span high, much and alternately branched, the stem and branches being all slender and round. The ultimate ramifications only are opposite, thickly set, and almost pectinate, awl-shaped, acute, scarcely a quarter of an inch long, and often shorter; indeed each of the longest is generally opposed by a much shorter one. The fructifications, in the form of a small red ball, grow on footstalks, alternate to each other, or irregularly scattered, but each of them constantly opposite to one of the awl-shaped branches. The colour, when fresh, is a beautiful deep transparent crimson. Mr. Turner, who communicated our specimen, considers this *Fucus* as an annual. Mr. Woodward has found it actually growing upon stones and pebbles on the coast at Cromer, since his first account of it was published.



L I C H E N pulmonarius.

*Lungwort Lichen.*C R Y P T O G A M I A *Algæ.*

GEN. CHAR. Male, scattered warts.

Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Leafy, lacinated, obtuse, smooth; above green and pitted, somewhat reticulated; downy beneath. Shields mostly marginal.

SYN. Lichen pulmonarius. *Linn. Sp. Pl.* 1612. *Huds.* 542. *With. v.* 4. 54. *Relb.* 432. *Sibth.* 331. *Abbot.* 267.Lichenoides peltatum arborum maximum. *Raii Syn.* 76.L. pulmoneum reticulatum vulgare, marginibus peltiferis. *Dill. Musc.* 212. *t.* 29. *f.* 113.Pulmonaria reticulata. *Hoffm. Pl. Lich. t.* 1. *f.* 2.

MOST plentiful in the northern or mountainous countries, where it clothes the trunks of large trees with a rich leafy garment. The fronds grow a little imbricated, but considerably raised from the bark into which their roots are inserted. They are leathery, green, deeply divided, irregularly and bluntly lobed, strongly pitted, the interstices forming a kind of network, which towards the margin of the frond is powdery or warty, bearing the supposed *pollen*. The under side is downy, blistered, pale, with a correspondent network of brown veins. Shields for the most part marginal, but not always; they are nearly sessile, flat, chestnut-coloured, with an elevated, smooth, green border. They are found at all times of the year, and in tolerable plenty.

This Lichen is used on the Continent not unsuccessfully, in a decoction with milk, to cure coughs. It is bitter, astringent and mucilaginous, and promotes expectoration, much like *Polygala vulgaris*, *t.* 76, which it is said to resemble in taste. It seems to be an instance of a foolish principle having led to truth, for it was first used to cure coughs because its figure resembled the lungs. So the *Orchis* tribe were used as stimulants for a peculiar purpose, on account of the shape of their roots. Like many other Lichens it dyes wool brown; some say of a deep orange.



LYCHNIS Flos-Cuculi.

*Meadow Lychnis, or Ragged Robin.**DECANDRIA Pentagynia.*

GEN. CHAR. *Cal.* of one leaf, oblong. *Petals* 5, with claws; their limb mostly divided. *Caps.* superior, opening with 5 teeth, of 1 or 5 cells.

SPEC. CHAR. *Petals* four-cleft. *Fruit* roundish, of one cell.

SYN. *Lychnis Flos-Cuculi.* *Linn. Sp. Pl.* 625. *Huds.* 199. *With.* 432. *Relb.* 177. *Sibth.* 145. *Abbot.* 100. *Curt. Lond. fasc.* 1. t. 33.

L. plumaria sylvestris simplex. *Raii Syn.* 338.

FREQUENT in moist meadows, flowering early in June, when its pretty delicate petals are seen quivering to every breeze; but the mower's scythe soon levels them in the undistinguished heap of meadow hay.

Root fibrous, perennial. Stem erect, one or two feet high, angular, leafy, roughish with little bristles that point downwards; clammy in the upper part; sometimes branched at the base, and the branches often take root at their joints. Leaves united at their insertion, lanceolate, entire, nearly smooth. Panicle forked, erect, with a pair of small leaves or bractæ at each subdivision. Calyx tubular, with ten strong dark-purple ribs. Petals rose-coloured, flaccid, cut into four linear segments, and crowned with two sharp erect teeth above the claw. Capsule of a roundish cylindrical figure, with but one cell. The seeds are numerous, each standing on a little footstalk, round a central receptacle.

A variety with double flowers, whose petals are extremely numerous and thickly set, is common in gardens, and the flowers are said to be sometimes found white.



Scilla maritima L. f. *maritima* L.

SENECIO tenuifolius.

*Hoary Groundsel.*SYNGENESIA *Polygamia-superflua.*GEN. CHAR. *Recept.* naked. *Down* simple. *Cal.* cylindrical, scaly at the base; scales dead at the tip.

SPEC. CHAR. Radius spreading. Leaves pinnatifid, somewhat revolute; paler and shaggy beneath. Stem erect, cottony.

SYN. *Senecio tenuifolius.* *With.* 723. *Jacq. Austr.* t. 278. *Sym. Syn.* 181. *Sibth.* 253.*S. erucifolius.* *Hudf.* 366. *Relb.* 316. *Abbot.* 182. *Curt. Lond. fasc.* 5. t. 64.*Jacobæa Senecionis folio incano perennis.* *Raii Syn.* 177.

SENT from Holm near the sea, Norfolk, by the Rev. Mr. Sutton. No plant is more variable in the appearance of its foliage. On a calcareous soil, its favourite situation, the leaves are very much revolute, and quite white beneath with a thick cottony web, of which the stem always more or less partakes; in damp shady places they are almost flat, and green, though always paler and somewhat shaggy, on the under side. Such are the extremes of the two varieties marked by Dr. Withering, but intermediate specimens are always to be found.

The root is perennial, moderately creeping. Stem simple, erect, wand-like, 1 to 3 feet high, leafy, furrowed, shaggy. Leaves numerous, alternate, pinnatifid; the uppermost with linear segments, very little toothed. Flowers corymbose, bright-yellow. Calyx scales broad, green, more or less woolly, with a white membranous border, a little brownish at the tip, though less so than in some other species; those at the base few and small. Rays broad, spreading, but soon revolute. Seed-down long, rough. It flowers in July and August, and is not a very common plant.

This is certainly distinct from *S. erucifolius* of Linnæus, the authentic specimen of which from Scania, described in both editions of *Sp. Pl.* though with wrong synonyms, much more nearly resembles *S. sylvaticus*, of which I am inclined to think it a variety.



HYPOCHÆRIS glabra.

*Smooth Cat's-ear.*SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Recept.* chaffy. *Cal.* somewhat imbricated. *Down* feathery.

SPEC. CHAR. Nearly smooth. Calyx oblong, imbricated. Stem branched, a little leafy. Leaves dentate or sinuated.

SYN. *Hypochæris glabra.* *Linn. Sp. Pl.* 1140. *Huds.* 347. *With.* 692. *Abbot.* 173. *Curt. Lond. fasc.* 3. t. 53.

Hieracium parvum in arenosis nascens. Raii Syn. 166.

A NATIVE of dry gravelly or sandy heaths, communicated from Bedfordshire by the Rev. Mr. Abbot. It was first observed in Norfolk by the Rev. Mr. Bryant, upon Cawston heath, and has since that time been pointed out to us by Mr. Crowe in turnep fields about Norwich, but in so luxuriant a state as scarcely to be known for the same species. Mr. Curtis's figure more approaches to this state. Ours expresses its growth when out of the reach of all manure. It flowers from June to the end of August.

Root annual, tapering. Stems several, round, smooth, simple or branched, spreading, and if branched generally bearing a leaf or two at each division. Leaves oblong, or tongue-shaped, blunt, toothed, and if luxuriant sinuated, nearly smooth, shining, sometimes ciliated and slightly hairy. Flowers terminal, solitary, erect, palish yellow, small, open only in a morning for 3 or 4 hours in bright weather. Calyx conical, slender, glaucous, smooth, its scales tipped with purple. Florets with 5 teeth. Chaff of the receptacle long, lanceolate, deciduous. Seed-down feathery, at first erect, then spreading; in the central florets the top of the seed is lengthened out into a stalk that elevates the down, which in those of the circumference is sessile.

This herb is milky and bitter like most of its natural family.



April 1. 1909 Collected by J. S. Sargent, London.

ASPLENIUM Trichomanes.

Common Maidenhair Spleenwort.

CRYPTOGAMA Filices.

GEN. CHAR. *Fructif.* in scattered lines. *Involucrum* originating laterally from a vein, and bursting inwardly.

SPEC. CHAR. Frond pinnated. Leaflets roundish, crenate.

SYN. Asplenium Trichomanes. *Linn. Sp. Pl.* 1540. *Huds.* 452. *With.* 768. *Relb.* 388. *Sibth.* 268. *Abbot.* 225. *Bolt. Fil. t.* 13. *Woodv. Med. Bot. t.* 204. *Dicks. H. Sicc. fasc.* 4. 17.

Trichomanes. *Raii Syn.* 119.

NOT uncommon on shady rocks, old walls, the north side of churches and similar situations, where its fructification may be found at almost all seasons.

Root tufted, woolly, perennial. Fronds numerous, spreading, lanceolate, consisting of a smooth, dark-brown, polished stalk, bearing many pairs of opposite, roundish, or rather ovate, crenate leaflets, of a deep green; their under side producing 6 or 8 oblong spots of fructification, whose covering membrane opens towards the mid-rib. The numerous capsules consist of two hemispheres bound by an elastic jointed ring, as in most of the *Filices dorsiferæ*.

This is a pretty fern, not unworthy of a place on shady rockwork, and about grottos or fountains. Its medical virtues are very doubtful. It has been used as a substitute for the Maidenhair of warmer climates, *Adiantum Capillus Veneris*, from which a syrup is made, perfumed with orange-flowers, and called Syrup of Capillaire. The virtues of even this, as a cure for coughs and colds, are probably owing to the fugar more than to the Maidenhair.



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ERROR.

The plate of *Fucus pedunculatus* is erroneously engraved 546, instead of 545; and that of *Conserva villosa* 545, which ought to be 546.

